

Question 1

The only example of gomphoses in the body are the articulations between the teeth and the maxilla or mandible.

Answer: <https://biology-forums.com/index.php?topic=499031>

Question 2

Bone is the most important storehouse in the body for minerals such as calcium, phosphorus, and magnesium salts.

Answer: <https://biology-forums.com/index.php?topic=498805>

Question 3

The yellow color of urine comes from the presence of:

- A) ammonia.
- B) sodium ions.
- C) urochrome.
- D) glucose.

Answer: <https://biology-forums.com/index.php?topic=501942>

Question 4

Damage to the hair cells of the spiral organ (organ of Corti) can result in a loss of:

- A) hearing.
- B) vision.
- C) equilibrium.
- D) olfaction.

Answer: <https://biology-forums.com/index.php?topic=500888>

Question 5

What happens to glucose molecules if the carrier proteins for tubular reabsorption are saturated and have reached their transport maximum?

Answer: <https://biology-forums.com/index.php?topic=501963>

Question 6

What bone meets each parietal bone at the squamous suture?

- A) temporal bone
- B) occipital bone
- C) frontal bone
- D) zygomatic bone

Answer: <https://biology-forums.com/index.php?topic=498862>

Question 7

What forms the basis for the body's steroids?

- A) testosterone
- B) glucose
- C) triglyceride
- D) cholesterol

Answer: <https://biology-forums.com/index.php?topic=498339>

Question 8

A network of nerves is known as a:

- A) ramus.
- B) plexus.
- C) root.
- D) horn.

Answer: <https://biology-forums.com/index.php?topic=500645>

Question 9

Which of the following are NOT components of an osteon?

- A) lamellae
- B) canaliculi
- C) lacunae
- D) trabeculae

Answer: <https://biology-forums.com/index.php?topic=498766>

Question 10

Breast milk also acts as a mild laxative and helps cleanse meconium, a tarry, green fecal material made up of bile and other wastes that is first excreted by the newborn.

Answer: <https://biology-forums.com/index.php?topic=511393>

Question 11

Glucose dissolves in the water of blood plasma. This mixture is best known as a(n):

- A) solution.
- B) suspension.
- C) colloid.
- D) aerosol.

Answer: <https://biology-forums.com/index.php?topic=498285>

Question 12

Which lymphoid organ is required for the selection of a functional population of T lymphocytes (T cells) for the immune system?

- A) thymus
- B) thyroid gland
- C) tonsil
- D) liver

Answer: <https://biology-forums.com/index.php?topic=501419>

Question 13

What is accomplished by the enterogastric reflex?

- A) The enterogastric reflex stimulates hydrogen ion release.
- B) The enterogastric reflex decreases vagal activity and acid secretion by the stomach.
- C) The enterogastric reflex stimulates intestinal gastrin release.
- D) The enterogastric reflex stimulates histamine secretion.

Answer: <https://biology-forums.com/index.php?topic=501678>

Question 14

Bipolar neurons have one axon and one dendrite.

Answer: <https://biology-forums.com/index.php?topic=500464>

Question 15

Dina, who is blood type A-, wants to donate blood to her friend Sarah who is blood type AB-. Do you recommend for Dina to donate blood to her friend? Explain why or why not.

Answer: <https://biology-forums.com/index.php?topic=501386>

Question 16

Respiratory acidosis results from:

- A) hyperventilation.
- B) hypocapnia.
- C) hypoventilation.
- D) hypoxia.

Answer: <https://biology-forums.com/index.php?topic=501592>

Question 17

Standing still in an elevator that suddenly lowers stimulates receptors in the:

- A) basilar membrane.
- B) spiral organ (organ of Corti).
- C) bony labyrinth.
- D) utricle and saccule.

Answer: <https://biology-forums.com/index.php?topic=500883>

Question 18

Central chemoreceptors detect a decrease in pH in interstitial fluids in the brain. What is the response of the medulla to maintain delivery of oxygen to cells?

- A) A feedback loop is initiated that indirectly increases parasympathetic activity which results in vasoconstriction and a rise in blood pressure.
B) A feedback loop is initiated that indirectly increases sympathetic activity which results in vasoconstriction and a rise in blood pressure.
C) A feedback loop is initiated that indirectly decreases sympathetic activity which results in vasodilation and a decrease in blood pressure.
D) A feedback loop is initiated that indirectly increases parasympathetic activity which results in vasodilation and a decrease in blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501224>

Question 19

During a vasectomy, the ductus deferens is cut and then either ligated (tied off) or cauterized (burned) at the ends. Determine the effect of a vasectomy on the passage of sperm from the male's body and the impact on testosterone production.

Answer: <https://biology-forums.com/index.php?topic=511286>

Question 20

Which auditory ossicle is connected to the tympanic membrane?

- A) incus
B) malleus
C) stapes
D) anvil

Answer: <https://biology-forums.com/index.php?topic=500874>

Question 21

The common viral sexually transmitted infections (STIs) are chlamydia, gonorrhea, syphilis, and trichomoniasis.

Answer: <https://biology-forums.com/index.php?topic=511267>

Question 22

Discuss the significance of the extreme permeability of lymphatic capillaries.

Answer: <https://biology-forums.com/index.php?topic=501507>

Question 23

After an evening drinking alcohol with friends, Sonja noticed a increase in urine output and woke with a dry mouth the next morning. Since alcohol inhibits antidiuretic hormone (ADH), explain how alcohol affects water reabsorption.

Answer: <https://biology-forums.com/index.php?topic=501986>

Question 24

Which blood type is compatible with B- during a transfusion?

- A) AB-
B) B+
C) O-
D) O+

Answer: <https://biology-forums.com/index.php?topic=501360>

Question 25

List the muscles of the levator ani group and provide the function of this group.

Answer: <https://biology-forums.com/index.php?topic=500272>

Question 26

Smooth muscle and skeletal muscle both possess:

- A) troponin.
B) myosin and actin filaments.
C) motor end plates.
D) transverse tubules (T-tubules).

Answer: <https://biology-forums.com/index.php?topic=500340>

Question 27

A series of measurements with a voltmeter show a neuron's membrane potential becoming more negative, from -70 mV to -85 mV. This neuron is experiencing a:

- A) depolarization phase.
B) repolarization phase.
C) hyperpolarization phase.
D) polarization phase.

Answer: <https://biology-forums.com/index.php?topic=500420>

Question 28

A damaged atrioventricular (AV) bundle or atrioventricular (AV) node will primarily affect the length of the:

- A) P wave.
- B) P-R interval.
- C) T wave.
- D) Q-T interval.

Answer: <https://biology-forums.com/index.php?topic=501125>

Question 29

Autorhythmicity is the responsibility of:

- A) skeletal muscle cells.
- B) cardiac pacemaker cells.
- C) contractile cells.
- D) cardiac muscle cells.

Answer: <https://biology-forums.com/index.php?topic=501104>

Question 30

The coxal joint is an articulation formed by:

- A) the head of the femur and the acetabulum.
- B) the greater trochanter of the femur and the obturator foramen.
- C) the head of the humerus and the glenoid cavity.
- D) the head of the radius and the humerus.

Answer: <https://biology-forums.com/index.php?topic=499029>

Question 31

The most common cause of abnormal hemoglobin is an inherited condition known as sickle cell anemia.

Answer: <https://biology-forums.com/index.php?topic=501365>

Question 32

Place these stages of the ovarian cycle in the correct order.

- 1) Corpus albicans
- 2) Vesicular (tertiary) follicle
- 3) Primary follicle
- 4) Ruptured follicle
- 5) Primordial follicle
- 6) Secondary follicle
- 7) Corpus luteum

- A) 5, 3, 6, 2, 4, 7, 1
- B) 5, 3, 6, 2, 7, 4, 1
- C) 5, 3, 6, 4, 2, 7, 1
- D) 5, 6, 3, 4, 2, 7, 1

Answer: <https://biology-forums.com/index.php?topic=511232>

Question 33

Synchondroses unite bones with _____ while symphyses unites bones with _____.

- A) fibrocartilage; hyaline cartilage
- B) dense regular collagenous tissue; elastic cartilage
- C) hyaline cartilage; fibrocartilage
- D) elastic cartilage; fibrocartilage

Answer: <https://biology-forums.com/index.php?topic=498978>

Question 34

What of the following confers passive immunity?

- A) antivenin against snake venom
- B) viral infection
- C) vaccination
- D) bacterial infection

Answer: <https://biology-forums.com/index.php?topic=501477>

Question 35

Which of the following is NOT true of glycolysis?

- A) Four molecules of ATP are synthesized.
- B) Two molecules of ATP are spent.
- C) Four molecules of NADH are spent.
- D) Glucose is split into two three-carbon pyruvate molecules.

Answer: <https://biology-forums.com/index.php?topic=501775>

Question 36

What taste sensation results when sodium ions enter gustatory cells through sodium ion channel receptors, and the cell depolarizes?

- A) bitter
- B) sour
- C) umami
- D) salty

Answer: <https://biology-forums.com/index.php?topic=500839>

Question 37

What organelle degrades old, worn-out organelles and cell components?

- A) peroxisome
- B) Golgi apparatus
- C) rough endoplasmic reticulum (RER)
- D) lysosome

Answer: <https://biology-forums.com/index.php?topic=498429>

Question 38

Identify the thoracic region.

Answer: <https://biology-forums.com/index.php?topic=498228>

Question 39

Which type of fibrous joint is found between bones of the cranium?

- A) synovial
- B) syndesmosis
- C) suture
- D) synchondrosis

Answer: <https://biology-forums.com/index.php?topic=498972>

Question 40

The pH of the blood primarily depends upon a normal concentration of:

- A) sodium ions.
- B) calcium ions.
- C) hydrogen ions.
- D) magnesium ions.

Answer: <https://biology-forums.com/index.php?topic=502039>

Question 41

In the spinal cord, nerve tracts or funiculi make up the:

- A) central canal.
- B) gray commissure.
- C) white columns.
- D) gray horns.

Answer: <https://biology-forums.com/index.php?topic=500546>

Question 42

Which cranial nerve is NOT involved in the parasympathetic nervous system?

- A) vagus nerve (CN X)
- B) oculomotor nerve (CN III)
- C) hypoglossal nerve (CN XII)
- D) facial nerve (CN VII)

Answer: <https://biology-forums.com/index.php?topic=500772>

Question 43

Ionic bonds result from:

- A) equal sharing of electrons between nonmetals.
- B) the transfer of electrons from a metal to a nonmetal.
- C) unequal sharing of electrons between nonmetals.
- D) weak attractions between polar molecules.

Answer: <https://biology-forums.com/index.php?topic=498293>

Question 44

What is NOT part of the endomembrane system?

- A) Golgi apparatus
- B) lysosome
- C) peroxisome
- D) endoplasmic reticulum

Answer: <https://biology-forums.com/index.php?topic=498430>

Question 45

Where would you expect to find fibrocartilage in the skeletal system?

- A) between the bones of the upper limbs
- B) between the vertebrae
- C) forming the epiphyseal plates of long bones
- D) between the ribs and sternum

Answer: <https://biology-forums.com/index.php?topic=498853>

Question 46

Where should the left ventricle send blood?

- A) left atrium
- B) pulmonary trunk
- C) aorta
- D) coronary sinus

Answer: <https://biology-forums.com/index.php?topic=501101>

Question 47

Sodium ions are moving with their concentration gradient with the use of a protein channel across a plasma membrane. Determine the type of membrane transport used to transport these sodium ions.

- A) simple diffusion
- B) primary active transport
- C) osmosis
- D) facilitated diffusion

Answer: <https://biology-forums.com/index.php?topic=498405>

Question 48

What stands hairs on end, causing piloerection?

- A) epidermal ridges
- B) dermal papillae
- C) arrector pili muscle
- D) epithelial root sheath

Answer: <https://biology-forums.com/index.php?topic=498692>

Question 49

Both isotonic eccentric contractions and isotonic concentric contractions shorten the muscle.

Answer: <https://biology-forums.com/index.php?topic=500379>

Question 50

If oxygen was NOT available as the final electron acceptor in the electron transport chain, which cellular respiration product could not be made?

- A) water
- B) carbon dioxide

C) oxaloacetate

D) acetyl-CoA

Answer: <https://biology-forums.com/index.php?topic=501783>

Question 51

What do dead keratinized cells form?

A) arrector pili muscle

B) hair bulb

C) hair shaft

D) hair root

Answer: <https://biology-forums.com/index.php?topic=498689>

Question 52

The sympathetic nervous system increases cardiac output by increasing both heart rate and stroke volume.

Answer: <https://biology-forums.com/index.php?topic=501165>

Question 53

Six-year-old Matthew broke his femur and one of his epiphyseal plates was damaged. Explain the role of the epiphyseal plate in longitudinal growth and predict the effects of a damaged epiphyseal plate on his future longitudinal growth.

Answer: <https://biology-forums.com/index.php?topic=498834>

Question 54

Why is vitamin D necessary?

A) Vitamin D protects the skin from pathogens.

B) Vitamin D protects the skin from UV radiation.

C) Vitamin D is required for calcium absorption from the small intestine.

D) Vitamin D critical for thermoregulation.

Answer: <https://biology-forums.com/index.php?topic=498660>

Question 55

Can ossification occur without calcification during longitudinal growth? Explain.

Answer: <https://biology-forums.com/index.php?topic=498849>

Question 56

The hypothalamus integrates emotion, memory, and sensory information and sends it to association areas of the cerebral cortex.

Answer: <https://biology-forums.com/index.php?topic=500582>

Question 57

The maintenance of a relatively constant internal environment is termed:

A) homeostasis.

B) integration.

C) effector control.

D) positive feedback.

Answer: <https://biology-forums.com/index.php?topic=498204>

Question 58

Explain where the two types of cholinergic receptors are located in the parasympathetic nervous system pathway.

Answer: <https://biology-forums.com/index.php?topic=500815>

Question 59

What makes RNA a unique nucleic acid?

A) RNA is built from building blocks known as a nucleotide.

B) RNA contains a sugar known as deoxyribose.

C) RNA contains a nitrogenous base known as uracil.

D) RNA is composed of two strands held together by hydrogen bonds.

Answer: <https://biology-forums.com/index.php?topic=498347>

Question 60

What do the parasympathetic and sympathetic nervous systems share in common?

- A) Both systems are called the "rest and digest" division of the autonomic nervous system (ANS).
- B) Both systems are divisions of the autonomic nervous system.
- C) Both systems have short preganglionic neurons and long postganglionic neurons.
- D) Both systems trigger the same motor response in target organs.

Answer: <https://biology-forums.com/index.php?topic=500745>

Question 61

Blood pressure in arteries is higher than the blood pressure in capillaries. Blood flows from arteries to capillaries due to the presence of a:

- A) negative feedback loop.
- B) gradient.
- C) homeostatic imbalance.
- D) positive feedback loop.

Answer: <https://biology-forums.com/index.php?topic=498214>

Question 62

Enlargement of the prostate gland can constrict the:

- A) epididymis.
- B) ductus deferens.
- C) seminal vesicle.
- D) ejaculatory duct.

Answer: <https://biology-forums.com/index.php?topic=511195>

Question 63

What part of the spinal cord carries motor information from the brain?

- A) posterior column
- B) spinocerebellar tract
- C) anterolateral system
- D) corticospinal tract

Answer: <https://biology-forums.com/index.php?topic=500550>

Question 64

By what week of prenatal development will the placenta be established?

- A) week 4
- B) week 8
- C) week 12
- D) week 16

Answer: <https://biology-forums.com/index.php?topic=511333>

Question 65

Brittle bone disease (osteogenesis imperfecta) usually results from a collagen deficiency. Explain how a collagen deficiency affects bone structure.

Answer: <https://biology-forums.com/index.php?topic=498818>

Question 66

Describe the fluid mosaic model of the plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=498470>

Question 67

Which of the following does NOT return blood to the right atrium of the heart?

- A) superior vena cava
- B) coronary sinus
- C) inferior vena cava
- D) pulmonary vein

Answer: <https://biology-forums.com/index.php?topic=501090>

Question 68

A solution containing equal number of hydrogen ions and hydroxide ions is:

- A) acidic.
- B) basic.

- C) neutral.
- D) alkaline.

Answer: <https://biology-forums.com/index.php?topic=498318>

Question 69

Which of the following is composed of multiple layers of cells?

- A) simple squamous epithelium
- B) transitional epithelium
- C) pseudostratified columnar epithelium
- D) simple columnar epithelium

Answer: <https://biology-forums.com/index.php?topic=498569>

Question 70

Chief cells release:

- A) pepsinogen.
- B) mucus.
- C) gastrin.
- D) intrinsic factor.

Answer: <https://biology-forums.com/index.php?topic=501669>

Question 71

The two parts of the nephron are the renal _____ and the renal _____.

Answer: <https://biology-forums.com/index.php?topic=501954>

Question 72

Which of the following best represents the functional classifications of joints ranked from least movable to most movable?

- A) synarthrosis, diarthrosis, amphiarthrosis
- B) amphiarthrosis, synarthrosis, diarthrosis
- C) diarthrosis, synarthrosis, amphiarthrosis
- D) synarthrosis, amphiarthrosis, diarthrosis

Answer: <https://biology-forums.com/index.php?topic=498961>

Question 73

Iron molecules released from the breakdown of hemoglobin are transported through the blood by:

- A) vitamin B12.
- B) transferrin.
- C) antibodies.
- D) albumin.

Answer: <https://biology-forums.com/index.php?topic=501317>

Question 74

What canals connect lacunae together?

- A) canaliculi
- B) central canals
- C) perforating (Volkmann's) canals
- D) central (Haversian) canals

Answer: <https://biology-forums.com/index.php?topic=498764>

Question 75

What is the hematocrit?

Answer: <https://biology-forums.com/index.php?topic=501374>

Question 76

Explain three differences between saturated and unsaturated fatty acids.

Answer: <https://biology-forums.com/index.php?topic=498366>

Question 77

The nail body covers the:

- A) nail root.

- B) nail bed.
- C) lunula.
- D) cuticle.

Answer: <https://biology-forums.com/index.php?topic=498696>

Question 78

Which of the following is a non-phagocytic cell?

- A) basophil
- B) eosinophil
- C) neutrophil
- D) macrophage

Answer: <https://biology-forums.com/index.php?topic=501420>

Question 79

Sucrose and lactose are two common dietary disaccharides. Explain which one of these disaccharides a patient with fructosemia should avoid. Fructosemia is a disorder in which fructose cannot be metabolized.

Answer: <https://biology-forums.com/index.php?topic=498391>

Question 80

Place the following steps of endomembrane system function in the correct order.

1. Golgi apparatus receives transport vesicles from the RER.
2. Ribosomes on the RER synthesize proteins.
3. Proteins are packaged into transport vesicles
4. Modified proteins may be secreted from the cell by exocytosis.
5. Proteins are modified by the Golgi apparatus.

- A) 2, 4, 3, 1, 5
- B) 1, 2, 3, 5, 4
- C) 2, 3, 1, 5, 4
- D) 3, 2, 1, 4, 5

Answer: <https://biology-forums.com/index.php?topic=498431>

Question 81

Cells that develop into osteoblasts are:

- A) osteogenic cells.
- B) osteoclasts.
- C) osteocytes.
- D) osteons.

Answer: <https://biology-forums.com/index.php?topic=498761>

Question 82

Negative feedback loops produce responses in the opposite direction of the initial stimulus while positive feedback loops produce responses in the same direction of the initial stimulus.

Answer: <https://biology-forums.com/index.php?topic=498226>

Question 83

What type of mucosa-associated lymphatic tissue (MALT) is located in the ileum (last portion) of the small intestine?

- A) adenoid
- B) tonsils
- C) Peyer's patches
- D) appendix

Answer: <https://biology-forums.com/index.php?topic=501405>

Question 84

The main components of the skin are the:

- A) epidermis and dermis.
- B) dermis and hypodermis.
- C) epidermis, dermis, and hypodermis.
- D) epidermis, dermis, hypodermis, and the subcutaneous layer.

Answer: <https://biology-forums.com/index.php?topic=498648>

Question 85

Failure of the thymus to develop, low circulating levels of lymphocytes, and failure of cell-mediated immunity characterize:

- A) severe-combined immunodeficiency (SCID).
- B) antibody-mediated hypersensitivity.
- C) acquired immunodeficiency syndrome (AIDS).
- D) human immunodeficiency virus 1 (HIV-1).

Answer: <https://biology-forums.com/index.php?topic=501485>

Question 86

Determine the membrane potential (mV) during the relative refractory period.

- A) -85 mV
- B) -55 mV
- C) +15 mV
- D) +30 mV

Answer: <https://biology-forums.com/index.php?topic=500432>

Question 87

Identify the mediastinum.

Answer: <https://biology-forums.com/index.php?topic=498236>

Question 88

During a tapeworm infection, you would expect to see increased numbers of:

- A) eosinophils.
- B) basophils.
- C) neutrophils.
- D) lymphocytes.

Answer: <https://biology-forums.com/index.php?topic=501331>

Question 89

An accumulation of excess interstitial fluid is known as:

- A) infection.
- B) lysis.
- C) edema.
- D) crenation.

Answer: <https://biology-forums.com/index.php?topic=501400>

Question 90

Explain the direction in which water moves between compartments as it relates to gradients involving hydrostatic pressure and osmotic pressure.

Answer: <https://biology-forums.com/index.php?topic=511162>

Question 91

Sally sustained damage to some autonomic ganglia. What part of the visceral reflex arc is interrupted?

- A) sensory reception
- B) initiation of a motor impulse in the central nervous system (CNS)
- C) motor response in a target cell
- D) integration

Answer: <https://biology-forums.com/index.php?topic=500731>

Question 92

Receptive field maps show the regions of skin and the spinal nerve that supplies somatic sensation to them.

Answer: <https://biology-forums.com/index.php?topic=500697>

Question 93

The female's pelvis is structured for pregnancy and childbirth and, as a result, is generally more narrow and deeper than a male pelvis.

Answer: <https://biology-forums.com/index.php?topic=498933>

Question 94

Using the information provided in this graph, which statement best summarizes the activity in this neuron?

- A) The cell gains positive charges, making the inside less negative.
- B) Positive charges are lost from the cell, making the inside more negative.
- C) The cells gains negative charges, making the inside more negative.
- D) The cell gains chloride ions, making the cell hyperpolarize.

Answer: <https://biology-forums.com/index.php?topic=500422>

Question 95

Vessels with a smaller radius will have an increased resistance to blood flow.

Answer: <https://biology-forums.com/index.php?topic=501265>

Question 96

What do skeletal muscle tissue and cardiac muscle tissue share in common?

- A) Both skeletal and cardiac muscle tissues are voluntary.
- B) Both skeletal and cardiac muscle tissues are striated.
- C) Both skeletal and cardiac muscle tissues possess intercalated discs.
- D) Both skeletal and cardiac muscle tissues perform peristalsis.

Answer: <https://biology-forums.com/index.php?topic=500287>

Question 97

Which of the following operates voluntarily and is controlled by the cerebral cortex?

- A) ileocecal valve
- B) internal anal sphincter
- C) pyloric sphincter
- D) external anal sphincter

Answer: <https://biology-forums.com/index.php?topic=501693>

Question 98

During a baseball game, Eddie experienced a rotator cuff injury that benched him for the rest of the season. Eddie's doctor said he would be sitting out to let the SITS muscles heal. What four muscles did his doctor reference?

Answer: <https://biology-forums.com/index.php?topic=500276>

Question 99

Which of the following is the most inferior portion of the uterus?

- A) fundus
- B) cervix
- C) infundibulum
- D) body

Answer: <https://biology-forums.com/index.php?topic=511221>

Question 100

Receptors on a postsynaptic CNS neuron bind glutamate. Describe how the postsynaptic neuron responds.

Answer: <https://biology-forums.com/index.php?topic=500491>

Question 101

What component of ground substance adheres cells to their places within the extracellular matrix (ECM)?

- A) hyaluronic acid
- B) glycoproteins
- C) glycosaminoglycans (GAGs)
- D) proteoglycans

Answer: <https://biology-forums.com/index.php?topic=498551>

Question 102

The left side of the heart is often called the systemic pump due to blood flow to the body.

Answer: <https://biology-forums.com/index.php?topic=501156>

Question 103

Jane has genital warts caused by human papillomavirus (HPV). Determine the form of contraception that will help her prevent the spread of this sexually transmitted infection (STI) to her sexual partner.

Answer: <https://biology-forums.com/index.php?topic=511285>

Question 104

List and summarize the five patterns of fascicles seen in skeletal muscles.

Answer: <https://biology-forums.com/index.php?topic=500263>

Question 105

Cardiac muscles perform peristalsis to pump blood through the heart.

Answer: <https://biology-forums.com/index.php?topic=500382>

Question 106

Like all other sensory pathways, the nerve impulses associated with olfaction are routed through the thalamus on the way to the primary olfactory cortex.

Answer: <https://biology-forums.com/index.php?topic=500902>

Question 107

In what direction will water move when hypotonic fluids are present in the plasma?

- A) Water is pulled from the interstitial fluid and plasma into the cell.
- B) Water is pushed out of the cytosol into the interstitial fluid and then plasma.
- C) Water is pulled of the cytosol and into the interstitial fluid and then plasma.
- D) There is no net movement of water when hypotonic fluids are present in the plasma.

Answer: <https://biology-forums.com/index.php?topic=502004>

Question 108

The hormone that is primarily involved in the control of bone resorption is parathyroid hormone (PTH).

Answer: <https://biology-forums.com/index.php?topic=498815>

Question 109

What leads to metabolic alkalosis?

- A) visiting a high altitude location
- B) prolonged vomiting and the loss of acidic stomach contents
- C) prolonged diarrhea in which bicarbonate ions are lost in the feces
- D) diabetic ketoacidosis in which excess acids are produced

Answer: <https://biology-forums.com/index.php?topic=511141>

Question 110

Explain the role of monocytes in the inflammatory response.

Answer: <https://biology-forums.com/index.php?topic=501514>

Question 111

Lymphocytes and monocytes both arise from:

- A) the lymphoid cell line.
- B) hematopoietic stem cells (HSCs).
- C) the myeloid cell line.
- D) myeloblasts.

Answer: <https://biology-forums.com/index.php?topic=501339>

Question 112

Explain the difference between the two main buffer systems.

Answer: <https://biology-forums.com/index.php?topic=511173>

Question 113

Identify the major extracellular and intracellular cations.

Answer: <https://biology-forums.com/index.php?topic=511168>

Question 114

The right and left atria depolarize and contract following the arrival of the action potential from the:

- A) Purkinje fibers.

- B) sinoatrial (SA) node.
- C) atrioventricular (AV) bundle.
- D) atrioventricular (AV) node.

Answer: <https://biology-forums.com/index.php?topic=501120>

Question 115

Place the following steps in order for motor control.

1. Upper motor neurons stimulate lower motor neurons.
2. Sensory information is relayed back to the cerebellum so movement can be modified if needed.
3. Upper motor neurons in the premotor cortex select a motor program.
4. Lower motor neurons stimulate a skeletal muscle to contract.
5. The basal nuclei enable the thalamus to stimulate upper motor neurons of the primary cortex.

- A) 3, 5, 1, 2, 4
- B) 2, 5, 3, 1, 4
- C) 3, 5, 1, 4, 2
- D) 5, 3, 1, 4, 2

Answer: <https://biology-forums.com/index.php?topic=500675>

Question 116

Fruits, honey, candy, and juices are dietary sources of:

- A) polysaccharides.
- B) complete proteins.
- C) monosaccharides and disaccharides.
- D) unsaturated fatty acids.

Answer: <https://biology-forums.com/index.php?topic=501830>

Question 117

What hormone appears to inhibit aldosterone and ADH release?

Answer: <https://biology-forums.com/index.php?topic=501965>

Question 118

Most veins below the diaphragm drain into the:

- A) superior mesenteric vein.
- B) superior vena cava.
- C) inferior vena cava.
- D) hepatic vein.

Answer: <https://biology-forums.com/index.php?topic=501254>

Question 119

Testosterone, a type of lipid known as a steroid, is moving along its concentration gradient. Determine and describe the specific type of membrane transport that will move testosterone into the cell.

Answer: <https://biology-forums.com/index.php?topic=498542>

Question 120

The uterus is anchored by the broad ligament, suspensory ligament, and the round ligament.

Answer: <https://biology-forums.com/index.php?topic=511262>

Question 121

Predict how a blockage in the common carotid artery affects blood flow.

Answer: <https://biology-forums.com/index.php?topic=501299>

Question 122

A person experiencing agnosias due to brain damage in the temporal association area will be aware of a stimulus but unable to identify it.

Answer: <https://biology-forums.com/index.php?topic=500595>

Question 123

Kelly is examining a myogram showing contractions of the gastrocnemius muscle. Assess how she should differentiate unfused (incomplete) tetanus from fused (complete) tetanus.

Answer: <https://biology-forums.com/index.php?topic=500386>

Question 124

When blood is centrifuged, what is found in the buffy coat?

- A) leukocytes and erythrocytes
- B) erythrocytes and platelets
- C) plasma and leukocytes
- D) platelets and leukocytes

Answer: <https://biology-forums.com/index.php?topic=501304>

Question 125

A group of skeletal muscle fibers together with the surrounding perimysium form a(n):

- A) ligament.
- B) endomysium.
- C) fascicle.
- D) myofibril.

Answer: <https://biology-forums.com/index.php?topic=500295>

Question 126

What type of contraction requires the greatest amount of tension?

- A) isotonic concentric contraction
- B) isotonic eccentric contraction
- C) isometric contraction
- D) miometric contraction

Answer: <https://biology-forums.com/index.php?topic=500336>

Question 127

What activates the intrinsic pathway of coagulation?

- A) factor XII contacts exposed collagen fibers
- B) prothrombin is converted to thrombin
- C) release of tissue factor (Factor III) by subendothelial cells
- D) fibrinogen is converted to fibrin

Answer: <https://biology-forums.com/index.php?topic=501351>

Question 128

Cell division occurs during:

- A) M phase.
- B) G1 phase.
- C) S phase.
- D) G2 phase.

Answer: <https://biology-forums.com/index.php?topic=498458>

Question 129

Which nervous system division works antagonistically to the sympathetic nervous system?

- A) sensory nervous system
- B) central nervous system
- C) parasympathetic nervous system
- D) somatic nervous system

Answer: <https://biology-forums.com/index.php?topic=500744>

Question 130

How are epithelial tissues classified?

- A) Epithelium is classified as either voluntary or involuntary.
- B) Epithelium is classified as either loose or dense.
- C) Epithelium is classified by the number of cell layers and the shape of the cells.
- D) Epithelium is classified by the presence or absence of ECM.

Answer: <https://biology-forums.com/index.php?topic=498558>

Question 131

Medications known as anticoagulants interfere with:

- A) platelet activation.
- B) platelet aggregation.
- C) vascular spasms.
- D) the coagulation cascade.

Answer: <https://biology-forums.com/index.php?topic=501346>

Question 132

Which hormones stimulate the growth of alveoli in the mother's mammary gland?

- A) oxytocin and progesterone
- B) estrogen and progesterone
- C) estrogen and prolactin
- D) prolactin and cortisol

Answer: <https://biology-forums.com/index.php?topic=511366>

Question 133

What is the outermost connective tissue covering of a nerve?

- A) endoneurium
- B) perineurium
- C) epimysium
- D) epineurium

Answer: <https://biology-forums.com/index.php?topic=500625>

Question 134

Which of the following is the primary factor in the maintenance of a negative charge during resting membrane potential?

- A) ligand-gated channels
- B) voltage-gated channels
- C) leak channels
- D) sodium-potassium pump

Answer: <https://biology-forums.com/index.php?topic=500414>

Question 135

Each of the following factors affects the efficiency of pulmonary gas exchange EXCEPT:

- A) diameter of an alveolus.
- B) partial pressure of carbon dioxide in the blood of the pulmonary capillaries.
- C) thickness of the respiratory membrane.
- D) surface area of the respiratory membrane.

Answer: <https://biology-forums.com/index.php?topic=501581>

Question 136

What cranial nerves are involved in the sensory and the motor roles for the corneal blink reflex?

- A) trigeminal nerve (V) as sensory; facial nerve (VII) as motor
- B) optic nerve (II) as sensory, oculomotor nerve (III) as motor
- C) trochlear nerve (IV) as sensory, abducens nerve (VI) as motor
- D) glossopharyngeal nerve (IX) as sensory, oculomotor nerve (III) as motor

Answer: <https://biology-forums.com/index.php?topic=500686>

Question 137

Which muscle is the agonist for sitting up?

- A) transversus abdominis
- B) external oblique
- C) rectus abdominis
- D) linea alba

Answer: <https://biology-forums.com/index.php?topic=500218>

Question 138

Discuss how image-processing occurs in the retina when light strikes photoreceptors.

Answer: <https://biology-forums.com/index.php?topic=500928>

Question 139

Which portion of the renal tubule has a brush border created by the presence of many microvilli?

- A) descending limb of the nephron loop (loop of Henle)
- B) distal tubule
- C) ascending limb of the nephron loop (loop of Henle)
- D) proximal tubule

Answer: <https://biology-forums.com/index.php?topic=501898>

Question 140

How do nutrients reach the epidermis of the skin?

- A) Blood vessels carry nutrients directly into the epidermis.
- B) Solute pumping transports nutrients into the epidermis.
- C) Nutrients migrate in vesicles from the hypodermis into the epidermis.
- D) Diffusion transports nutrients from blood vessels in the dermis into the epidermis.

Answer: <https://biology-forums.com/index.php?topic=498652>

Question 141

The final process to occur in the alimentary canal is:

- A) segmentation.
- B) defecation.
- C) secretion.
- D) absorption.

Answer: <https://biology-forums.com/index.php?topic=501694>

Question 142

The layers of bone tissue immediately deep to the periosteum are:

- A) circumferential lamellae.
- B) trabeculae.
- C) concentric lamellae.
- D) lacunae.

Answer: <https://biology-forums.com/index.php?topic=498786>

Question 143

The right corticospinal tracts of the spinal cord usually carry motor information from the left cerebral cortex of the brain.

Answer: <https://biology-forums.com/index.php?topic=500590>

Question 144

Which cranial nerve detects smell?

- A) optic nerve (II)
- B) olfactory nerve (I)
- C) oculomotor nerve (III)
- D) trochlear nerve (IV)

Answer: <https://biology-forums.com/index.php?topic=500636>

Question 145

Why should a surgeon cut along the tension (cleavage) lines when performing surgery?

Answer: <https://biology-forums.com/index.php?topic=498725>

Question 146

Predict the possibility of an offspring with a widow's peak, a dominant inherited trait affecting the hairline, when both parents are heterozygous for the trait.

- A) 0% of the offspring will have a widow's peak.
- B) 25% of the offspring will have a widow's peak.
- C) 75% of the offspring will have a widow's peak.
- D) 100% of the offspring will have a widow's peak.

Answer: <https://biology-forums.com/index.php?topic=511370>

Question 147

What might accompany an overdose of insulin?

- A) hypoglycemia

- B) polyuria
- C) hyperglycemia
- D) ketoacidosis

Answer: <https://biology-forums.com/index.php?topic=501012>

Question 148

Tommy fell and skinned his knee. The scrape did not bleed. He must have only damaged the:

- A) epidermis.
- B) dermis.
- C) hypodermis.
- D) subcutaneous layer.

Answer: <https://biology-forums.com/index.php?topic=498649>

Question 149

Identify the thoracic cavity.

Answer: <https://biology-forums.com/index.php?topic=498233>

Question 150

How long will it take for a suntan to fade?

- A) 5 to 10 days
- B) 10 to 20 days
- C) 20 to 40 days
- D) 40 to 50 days

Answer: <https://biology-forums.com/index.php?topic=498669>

Question 151

In contrast to the nervous system, the endocrine system accomplishes homeostasis by:

- A) sending action potentials that excite or inhibit target cells.
- B) controlling the activities of the autonomic nervous system (ANS).
- C) releasing hormones into the blood that regulate the functions of other cells.
- D) producing an immediate effect in target cells.

Answer: <https://biology-forums.com/index.php?topic=500563>

Question 152

Which type of leukocyte may produce antibodies?

- A) neutrophil
- B) lymphocyte
- C) eosinophil
- D) monocyte

Answer: <https://biology-forums.com/index.php?topic=501334>

Question 153

During the absolute refractory period, production of an action potential is not possible.

Answer: <https://biology-forums.com/index.php?topic=500468>

Question 154

Why is articular cartilage necessary for long bones?

- A) Articular cartilage is the site of lengthwise growth in young children and adolescents.
- B) Articular cartilage lines all inner surfaces of the bone.
- C) Articular cartilage allows bones to rub together with reduced friction at joints.
- D) Articular cartilage houses red bone marrow for hematopoiesis.

Answer: <https://biology-forums.com/index.php?topic=498753>

Question 155

What of the following should NOT elicit an immune response in your own body?

- A) major histocompatibility complex (MHC) molecules bound to antigens
- B) self antigens
- C) immunogens
- D) haptens bound with a protein carrier

Answer: <https://biology-forums.com/index.php?topic=501433>

Question 156

How is polyspermy prevented?

- A) acrosomal reaction
- B) capacitation
- C) cortical reaction
- D) sperm migration

Answer: <https://biology-forums.com/index.php?topic=511303>

Question 157

A lack of memory cells mainly affects the primary immune response.

Answer: <https://biology-forums.com/index.php?topic=501501>

Question 158

The white matter of the cerebellum is known as:

- A) cerebellar cortex.
- B) arbor vitae.
- C) vermis.
- D) folia.

Answer: <https://biology-forums.com/index.php?topic=500524>

Question 159

An angry child holds his breath since his parents said it is time to come in from playing. His carbon dioxide levels continue to climb and his parents are concerned what will happen to him. Predict how the respiratory system handles the rising carbon dioxide levels.

Answer: <https://biology-forums.com/index.php?topic=501641>

Question 160

The indentation on the posterior surface of the distal epiphysis of the humerus is the:

- A) trochlear notch.
- B) coronoid fossa.
- C) olecranon fossa.
- D) radial groove.

Answer: <https://biology-forums.com/index.php?topic=498895>

Question 161

In the dark (absence of a stimulus), the photoreceptors are:

- A) depolarized.
- B) bleached.
- C) polarized.
- D) hyperpolarized.

Answer: <https://biology-forums.com/index.php?topic=500868>

Question 162

What sweeps foreign debris from the lower respiratory passages?

- A) gap junctions
- B) cilia
- C) microvilli
- D) flagella

Answer: <https://biology-forums.com/index.php?topic=501550>

Question 163

What are sexually transmitted infections (STIs) and what impact can they have on the reproductive systems of those who have one?

Answer: <https://biology-forums.com/index.php?topic=511284>

Question 164

Neuroendocrine glands, such as the adrenal medulla, consist of nervous tissue yet secrete chemicals known as neurohormones.

Answer: <https://biology-forums.com/index.php?topic=501028>

Question 165

Six-year-old Anika injured an epiphyseal plate in her femur. Explain the significance of this injury.

Answer: <https://biology-forums.com/index.php?topic=500176>

Question 166

For a person who starts running for exercise,

- A) bone deposition is not related to bone resorption.
- B) bone deposition is less than bone resorption.
- C) bone deposition exceeds bone resorption.
- D) bone deposition equals bone resorption.

Answer: <https://biology-forums.com/index.php?topic=498791>

Question 167

Which of the following is the most complex structural level of organization?

- A) cellular level
- B) tissue level
- C) organ level
- D) chemical level

Answer: <https://biology-forums.com/index.php?topic=498169>

Question 168

The paired and identical copies of a chromosome are called centromeres.

Answer: <https://biology-forums.com/index.php?topic=498495>

Question 169

The portion of the renal tubule through which filtrate initially flows is known as the:

- A) proximal tubule.
- B) collecting duct.
- C) distal tubule.
- D) nephron loop (loop of Henle).

Answer: <https://biology-forums.com/index.php?topic=501897>

Question 170

The hole in the spinal cord through which CSF flows is the:

- A) vertebral foramen.
- B) intervertebral foramen.
- C) central canal.
- D) anterior median fissure.

Answer: <https://biology-forums.com/index.php?topic=500547>

Question 171

Predict the type of chemical bond that may form between two nonmetals.

Answer: <https://biology-forums.com/index.php?topic=498356>

Question 172

What do the umbilical arteries transport?

- A) deoxygenated blood away from the fetal heart
- B) oxygenated blood away from the fetal heart
- C) oxygenated blood toward the fetal heart
- D) nutrients toward the fetal heart

Answer: <https://biology-forums.com/index.php?topic=511335>

Question 173

Mrs. Sanchez had a great deal of inflammation after her recent surgery. The inflammation was triggered by the antibody known as:

- A) IgA
- B) IgE
- C) IgM
- D) IgD

Answer: <https://biology-forums.com/index.php?topic=501471>

Question 174

Which muscle abducts the thigh, medially rotates the thigh, and stabilizes the pelvis during walking?

- A) biceps femoris
- B) gluteus minimus
- C) semimembranosus
- D) obturator externus

Answer: <https://biology-forums.com/index.php?topic=500242>

Question 175

How are vitamins classified?

- A) macronutrients
- B) carbohydrates
- C) micronutrients
- D) minerals.

Answer: <https://biology-forums.com/index.php?topic=501828>

Question 176

Why it is critical that the peroxisome is a membrane-bounded organelle?

Answer: <https://biology-forums.com/index.php?topic=498476>

Question 177

What inhibits aldosterone release?

- A) corticosteroid-releasing hormone (CRH)
- B) decreased blood potassium ion concentration
- C) decreased blood pH
- D) angiotensin II

Answer: <https://biology-forums.com/index.php?topic=500995>

Question 178

Rick learned his elbow pain results from a damaged tendon. Identify and describe the type of tissue that forms tendons.

Answer: <https://biology-forums.com/index.php?topic=498618>

Question 179

Erythropoiesis is the process by which all formed elements are made.

Answer: <https://biology-forums.com/index.php?topic=501364>

Question 180

The sympathetic nervous system:

- A) increases digestive processes.
- B) has no effect on digestive processes.
- C) inhibits digestive processes.
- D) increases chemical digestive processes, but decreases mechanical digestive processes.

Answer: <https://biology-forums.com/index.php?topic=501647>

Question 181

Simple squamous epithelium is located in the:

- A) descending limb of the nephron loop (loop of Henle).
- B) distal tubule.
- C) proximal tubule.
- D) ascending limb of the nephron loop (loop of Henle).

Answer: <https://biology-forums.com/index.php?topic=501899>

Question 182

Blood doping is a controversial topic in competitive sports and can involve injections of erythropoietin (EPO). Predict the effect on erythropoiesis and explain why an athlete might consider EPO injections to provide a competitive edge.

Answer: <https://biology-forums.com/index.php?topic=501388>

Question 183

Determine the process that will occur when net filtration pressure is negative.

- A) diffusion
- B) osmosis
- C) filtration
- D) absorption

Answer: <https://biology-forums.com/index.php?topic=501239>

Question 184

List the three types of nutrient monomers the body uses for its catabolism to generate ATP.

Answer: <https://biology-forums.com/index.php?topic=501855>

Question 185

Eupnea is controlled by the:

- A) apneustic center.
- B) glossopharyngeal nerve.
- C) respiratory rhythm generator (RRG).
- D) pneumotaxic center.

Answer: <https://biology-forums.com/index.php?topic=501595>

Question 186

Predict the position of the valves when the ventricles contract.

- A) Both AV valves are forced shut while both semilunar valves are forced open.
- B) Both AV valves are forced open while both semilunar valves are forced shut.
- C) Both AV valves and semilunar valves are forced shut.
- D) Both AV valves and semilunar valves are forced open.

Answer: <https://biology-forums.com/index.php?topic=501130>

Question 187

Most of a cell's DNA is located in its:

- A) nucleus.
- B) Golgi apparatus.
- C) ribosomes.
- D) lysosomes.

Answer: <https://biology-forums.com/index.php?topic=498436>

Question 188

Which of the following best describes the structure of the plasma membrane?

- A) The plasma membrane is a single-layered membrane that surrounds the nucleus of the cell.
- B) The plasma membrane is a double layer of protein enclosing the plasma.
- C) The plasma membrane is a phospholipid bilayer surrounding the cell.
- D) The plasma membrane is composed of cristae.

Answer: <https://biology-forums.com/index.php?topic=498398>

Question 189

What hormone is produced by adipocytes to regulate satiety, a feeling of fullness after eating?

- A) erythropoietin (EPO)
- B) calcitriol
- C) leptin
- D) atrial natriuretic peptide (ANP)

Answer: <https://biology-forums.com/index.php?topic=501022>

Question 190

Which cranial nerve is responsible for transmitting information about sounds and head position and movement to the brain?

- A) facial nerve (CN VII)
- B) vestibulocochlear nerve (CN VIII)
- C) optic nerve (CN II)
- D) olfactory nerve (CN I)

Answer: <https://biology-forums.com/index.php?topic=500898>

Question 191

Document the changes in the histology as the respiratory zone passageways decrease in diameter.

Answer: <https://biology-forums.com/index.php?topic=501612>

Question 192

Which of the following volumes should be the greatest?

- A) end-diastolic volume (EDV)
- B) end-diastolic volume (EDV) — end systolic volume (ESV)
- C) end-systolic volume (ESV)
- D) stroke volume (SV)

Answer: <https://biology-forums.com/index.php?topic=501142>

Question 193

Describe how animals store excess glucose in the body.

Answer: <https://biology-forums.com/index.php?topic=498365>

Question 194

A young patient is short in stature, with his limbs and trunk in proportion. His mental development appears to be appropriate for his age. Determine and discuss the type of hormonal disorder he likely has.

Answer: <https://biology-forums.com/index.php?topic=501057>

Question 195

Summarize the cell's activities during the G1, S, and G2 phases of the cell cycle.

Answer: <https://biology-forums.com/index.php?topic=498483>

Question 196

In an adult, each coxal bone is made of three fused bones: ilium, ischium, and pubis bones.

Answer: <https://biology-forums.com/index.php?topic=498932>

Question 197

After eating a large meal, Mr. Davis felt sleepy. Which nervous system dominates?

- A) systemic nervous system
- B) somatic nervous system
- C) parasympathetic nervous system
- D) sympathetic nervous system

Answer: <https://biology-forums.com/index.php?topic=500743>

Question 198

Explain the difference between electrolytes and nonelectrolytes.

Answer: <https://biology-forums.com/index.php?topic=511159>

Question 199

Discuss what is accomplished by mitosis and cytokinesis during the M phase.

Answer: <https://biology-forums.com/index.php?topic=498486>

Question 200

What type of tissue makes up the a, or anterior pituitary gland?

- A) glandular epithelium
- B) loose adipose connective tissue
- C) nervous tissue
- D) dense elastic connective tissue

Answer: <https://biology-forums.com/index.php?topic=500959>

Question 201

Julian likes to ride his bike every day. Determine the effect of exercise on his basal metabolic rate (BMR).

- A) BMR is not influenced by exercise.

- B) The metabolic rate increases during exercise as much as ten-fold above BMR.
C) The metabolic rate only increases if the person exercising is male.
D) The metabolic rate decreases during exercise as much as ten-fold below BMR.

Answer: <https://biology-forums.com/index.php?topic=501818>

Question 202

Which muscles elevate the scapula?

- A) trapezius and levator scapulae
B) rhomboid major and rhomboid minor
C) pectoralis minor and serratus anterior
D) pectoralis major and pectoralis minor

Answer: <https://biology-forums.com/index.php?topic=500223>

Question 203

Water crosses capillary beds by:

- A) diffusion.
B) transcytosis.
C) filtration.
D) facilitated diffusion.

Answer: <https://biology-forums.com/index.php?topic=501233>

Question 204

How could you use the Learning Outcomes in this book to help you study?

- A) Rewrite each Learning Outcome in your notes.
B) Recite the Learning Outcomes until you have them memorized.
C) Read through the Learning Outcomes after you have completed a section.
D) Write down the answers to the Learning Outcomes.

Answer: <https://biology-forums.com/index.php?topic=498166>

Question 205

Carbon dioxide results from the loss of carbons during:

- A) ATP production by ATP synthase.
B) the citric acid cycle.
C) the electron transport chain.
D) chemiosmosis.

Answer: <https://biology-forums.com/index.php?topic=501777>

Question 206

Which of the following is the same among isotopes of the same element?

- A) atomic number
B) number of neutrons
C) mass number
D) both the number of neutrons and the mass number

Answer: <https://biology-forums.com/index.php?topic=498283>

Question 207

Atoms that satisfy the octet rule are said to be:

- A) inert.
B) reactive.
C) isotopes.
D) ions.

Answer: <https://biology-forums.com/index.php?topic=498286>

Question 208

Which of the following is NOT a cytokine involved in innate immunity?

- A) opsonins
B) tumor necrosis factor (TNF)
C) interleukins
D) interferons

Answer: <https://biology-forums.com/index.php?topic=501425>

Question 209

In the vertebral column, there are 7 cervical vertebrae, 12 thoracic vertebrae, 5 lumbar vertebrae, 5 fused sacral vertebrae, and 3-5 fused coccygeal vertebra to make an average total of 33 vertebrae in an older adult.

Answer: <https://biology-forums.com/index.php?topic=498927>

Question 210

What value best represents resting membrane potential of skeletal muscle cells?

- A) +15 mV
- B) +35 mV
- C) 0 mV
- D) -85 mV

Answer: <https://biology-forums.com/index.php?topic=500307>

Question 211

Each lung is situated within a subcavity of the thoracic cavity known as the:

- A) peritoneal cavity.
- B) pericardial cavity.
- C) abdominopelvic cavity.
- D) pleural cavity.

Answer: <https://biology-forums.com/index.php?topic=501560>

Question 212

What is the basic function of all muscle tissue?

- A) generate muscle tension
- B) produce voluntary contractions
- C) regulate body temperature
- D) stabilize joints

Answer: <https://biology-forums.com/index.php?topic=500286>

Question 213

Vincristine is a vinca alkaloid used as a cancer treatment. This drug disrupts the formation of the mitotic spindle fibers. Why do you think vincristine is an effective chemotherapy drug? Explain the effects of this drug on cell division.

Answer: <https://biology-forums.com/index.php?topic=498547>

Question 214

Summarize the relationship between the radius of a blood vessel and blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501279>

Question 215

The medial rectus muscle and lateral rectus muscle pull the eye in the same direction.

Answer: <https://biology-forums.com/index.php?topic=500255>

Question 216

Which wave on the electrocardiogram (ECG) corresponds with the ventricular filling phase of the cardiac cycle?

- A) P wave
- B) S wave
- C) T wave
- D) S-T segment

Answer: <https://biology-forums.com/index.php?topic=501139>

Question 217

Which hormone controls the milk-let-down reflex?

- A) antidiuretic hormone (ADH, or vasopressin)
- B) oxytocin
- C) prolactin
- D) gonadotropins

Answer: <https://biology-forums.com/index.php?topic=500966>

Question 218

The type of contraction in which length of the muscle fibers do not change is called:

- A) isometric.
- B) isotonic concentric.
- C) isotonic eccentric.
- D) tetany.

Answer: <https://biology-forums.com/index.php?topic=500335>

Question 219

Which tarsal bones of the foot are proximally situated?

- A) cuboid and scaphoid
- B) medial, intermediate, and lateral cuneiform
- C) scaphoid, lunate, triquetrum, and pisiform
- D) talus, calcaneus, navicular

Answer: <https://biology-forums.com/index.php?topic=498918>

Question 220

Both the left and right atria receive blood from:

- A) the lungs.
- B) the ventricles.
- C) veins.
- D) arteries.

Answer: <https://biology-forums.com/index.php?topic=501078>

Question 221

People who are unable to distinguish certain colors have a form of:

- A) color blindness.
- B) glaucoma.
- C) cataracts.
- D) astigmatism.

Answer: <https://biology-forums.com/index.php?topic=500865>

Question 222

What socket of the coxal bone articulates with the femur?

- A) pubic symphysis
- B) obturator foramen
- C) iliac spine
- D) acetabulum

Answer: <https://biology-forums.com/index.php?topic=498908>

Question 223

Where are the general senses located?

- A) skin
- B) nose
- C) eyes
- D) tongue

Answer: <https://biology-forums.com/index.php?topic=500824>

Question 224

What structure allows the diaphysis of the bone to increase in length?

- A) epiphyseal plate
- B) osteon
- C) lacunae
- D) epiphyseal line

Answer: <https://biology-forums.com/index.php?topic=498752>

Question 225

Classify the elbow, which acts like a hinge and allows motion in only one perpendicular plane.

- A) monoaxial joint
- B) biaxial joint
- C) multiaxial (triaxial) joint
- D) uniaxial joint

Answer: <https://biology-forums.com/index.php?topic=499010>

Question 226

What cell gives rise to all formed elements?

- A) erythroblast
- B) reticulocyte
- C) proerythroblast
- D) hematopoietic stem cell (HSC)

Answer: <https://biology-forums.com/index.php?topic=501320>

Question 227

What largely determines preload?

- A) stroke volume
- B) end-diastolic volume (EDV)
- C) end-systolic volume (ESV)
- D) afterload

Answer: <https://biology-forums.com/index.php?topic=501149>

Question 228

What type of synapse must have receptors to transmit signals?

- A) chemical synapse
- B) electrical synapse
- C) both chemical and electrical synapses
- D) neither chemical nor electrical synapses

Answer: <https://biology-forums.com/index.php?topic=500442>

Question 229

How are the nervous system and endocrine system similar?

- A) Effects of both the nervous system and the endocrine system are immediate and short-lasting.
- B) The nervous system works antagonistically to the endocrine system to achieve homeostasis.
- C) Cells of both the nervous system and the endocrine system release chemicals to communicate with cells.
- D) Both the nervous system and the endocrine system operate over a series of neurons to directly affect target cells.

Answer: <https://biology-forums.com/index.php?topic=500940>

Question 230

Explain the impact on a synovial joint that has sustained damage to the articular cartilage.

Answer: <https://biology-forums.com/index.php?topic=500177>

Question 231

What is the oxygen-binding protein found in erythrocytes?

- A) beta globulin
- B) hemoglobin
- C) albumin
- D) gamma globulin

Answer: <https://biology-forums.com/index.php?topic=501315>

Question 232

What region of the retina contains a high density of photoreceptor cells and allows for extremely detailed vision?

- A) optic disc
- B) fovea centralis
- C) ciliary body
- D) ora serrata

Answer: <https://biology-forums.com/index.php?topic=500852>

Question 233

List the five methods of birth control and provide at least one example of each method.

Answer: <https://biology-forums.com/index.php?topic=511283>

Question 234

What part of each metacarpal forms the "knuckle" of your hand?

- A) head
- B) tail
- C) body
- D) base

Answer: <https://biology-forums.com/index.php?topic=498900>

Question 235

List the three primary brain vesicles and describe what each part eventually forms.

Answer: <https://biology-forums.com/index.php?topic=500597>

Question 236

Upon removal of the larynx, a person would no longer be able to:

- A) sneeze.
- B) swallow.
- C) cough.
- D) produce sounds.

Answer: <https://biology-forums.com/index.php?topic=501546>

Question 237

Melanin is produced upon exposure to:

- A) cold.
- B) heat.
- C) UV radiation.
- D) wind.

Answer: <https://biology-forums.com/index.php?topic=498683>

Question 238

When electrons are lost from one substance, they are transferred to another molecule in reactions known as:

- A) phosphorylation reactions.
- B) synthesis reactions.
- C) oxidation-reduction reactions.
- D) endergonic reactions.

Answer: <https://biology-forums.com/index.php?topic=501768>

Question 239

Which of the following encourages gastric emptying?

- A) high degree of stretch in the duodenum wall
- B) low pH entering the duodenum
- C) low lipid composition in chyme entering the duodenum
- D) high solute concentration in chyme entering the duodenum

Answer: <https://biology-forums.com/index.php?topic=501680>

Question 240

The prostate gland releases clotting proteins into ejaculated semen which cause coagulation and temporarily prevents the sperm from leaking back out of the female reproductive tract.

Answer: <https://biology-forums.com/index.php?topic=511257>

Question 241

Describe the structure of the three tunics of a blood vessel.

Answer: <https://biology-forums.com/index.php?topic=501276>

Question 242

During cold temperatures, the testes are pulled closer to the pelvic floor and the warmth of the body wall, and the scrotum becomes shorter and heavily wrinkled.

Answer: <https://biology-forums.com/index.php?topic=511258>

Question 243

A tuberculosis antibiotic, discovered in the 1950's, prevents the reduction of NAD⁺ in the bacteria causing the infection. Determine the effect of this medication on ATP production during glycolysis.

Answer: <https://biology-forums.com/index.php?topic=501873>

Question 244

Bronchodilation may occur in response to:

- A) increased mucus.
- B) the parasympathetic nervous system.
- C) inflammation.
- D) the sympathetic nervous system.

Answer: <https://biology-forums.com/index.php?topic=501570>

Question 245

Bone is the most important storehouse in the body for:

- A) iron.
- B) sodium.
- C) chlorine.
- D) calcium.

Answer: <https://biology-forums.com/index.php?topic=498742>

Question 246

What statement does NOT describe the methods by which chemical buffer systems operate to maintain pH?

- A) When a strong acid is added to a solution, the weak base of the buffer system binds the released hydrogen ions and removes them from solution.
- B) All excess hydrogen ions are removed from the body in the urine.
- C) Buffer systems consist of a weak acid and its conjugate weak base which function to resist large swings in pH.
- D) When a strong base is added to a solution, the buffer system's weak acid releases its hydrogen ions to bind the base ions.

Answer: <https://biology-forums.com/index.php?topic=502041>

Question 247

Which of the following is an appropriate skin response to cold?

- A) dermal blood vessels vasoconstrict
- B) dermal blood vessels vasodilate
- C) vitamin D production increases
- D) sebaceous gland secretions increase

Answer: <https://biology-forums.com/index.php?topic=498659>

Question 248

Glucosuria, polyuria, and polydipsia are symptoms of both type I diabetes mellitus (insulin-dependent diabetes mellitus) and type II diabetes mellitus (non-insulin dependent diabetes mellitus).

Answer: <https://biology-forums.com/index.php?topic=501037>

Question 249

The four extraembryonic membranes that arise from the bilaminar embryonic disc are the chorion, amnion, allantois, and yolk sac.

Answer: <https://biology-forums.com/index.php?topic=511379>

Question 250

Two or more atoms of the same element that are chemically combined are known as:

- A) molecules.
- B) compounds.
- C) ions.
- D) suspensions.

Answer: <https://biology-forums.com/index.php?topic=498289>

Question 251

Ms. Parker has damage to the sensory root of the facial nerve (VII). Which of the following symptoms matches this information?

- A) inability to elevate the mandible

- B) inability to swallow
- C) inability to taste
- D) inability to smell

Answer: <https://biology-forums.com/index.php?topic=500638>

Question 252

Which of the following is NOT a function of the skeletal system?

- A) blood cell formation
- B) communication
- C) protection of internal organs
- D) mineral storage

Answer: <https://biology-forums.com/index.php?topic=498741>

Question 253

Thermoregulation involves a steady core body temperature near:

- A) 34.7 °C (94.5 °F).
- B) 37.5 °C (99.5 °F).
- C) 35.4 °C (95.7 °F).
- D) 39.0 °C (102.2 °F).

Answer: <https://biology-forums.com/index.php?topic=501821>

Question 254

Chondrocytes are to cartilage as osteocytes are to:

- A) blood.
- B) bone.
- C) fat.
- D) skin.

Answer: <https://biology-forums.com/index.php?topic=498586>

Question 255

Drugs known as beta-blockers may be useful in treating:

- A) a fast heart rate.
- B) benign prostatic hyperplasia.
- C) asthma.
- D) opiate withdrawal.

Answer: <https://biology-forums.com/index.php?topic=500756>

Question 256

Which of the following statements about the cytoskeleton is FALSE?

- A) The cytoskeleton provides the characteristic shape and size to a cell.
- B) The cytoskeleton functions in movement.
- C) The cytoskeleton synthesizes proteins.
- D) The cytoskeleton supports the plasma and nuclear membranes.

Answer: <https://biology-forums.com/index.php?topic=498432>

Question 257

Which condition is usually due to hyperparathyroidism?

- A) hyperglycemia
- B) hypercalcemia
- C) hyperkalemia
- D) hypernatremia

Answer: <https://biology-forums.com/index.php?topic=502034>

Question 258

Summarize the two phases of the cardiac cycle during which all four heart valves are briefly closed.

Answer: <https://biology-forums.com/index.php?topic=501182>

Question 259

A white blood cell engulfs a bacterium through a process called:

- A) endocytosis.
- B) primary active transport.
- C) exocytosis.
- D) facilitated diffusion.

Answer: <https://biology-forums.com/index.php?topic=498420>

Question 260

Proton-pump inhibitors are drugs that block the secretion of gastric acids. Which cells are affected by these drugs?

- A) chief cells
- B) enteroendocrine cells
- C) parietal cells
- D) mucous neck cells

Answer: <https://biology-forums.com/index.php?topic=501672>

Question 261

Within the nucleus, where does ribosome assembly occur?

- A) nucleoplasm
- B) centromere
- C) nucleolus
- D) nuclear pore

Answer: <https://biology-forums.com/index.php?topic=498440>

Question 262

Spongy bone resists forces from many directions and forms a protective framework for the red bone marrow.

Answer: <https://biology-forums.com/index.php?topic=498810>

Question 263

During muscle contraction, myosin crossbridges bind to active sites on:

- A) tropomyosin.
- B) troponin.
- C) actin.
- D) T-tubules.

Answer: <https://biology-forums.com/index.php?topic=500316>

Question 264

Cephalocaudal folding creates the:

- A) head and buttocks regions.
- B) primitive gut.
- C) future trunk region.
- D) digestive tract.

Answer: <https://biology-forums.com/index.php?topic=511324>

Question 265

What provides a link between the nervous system and the endocrine system?

- A) thalamus
- B) cerebellum
- C) hypothalamus
- D) pons

Answer: <https://biology-forums.com/index.php?topic=500564>

Question 266

How does the afferent arteriole vessel diameter change in order to decrease glomerular hydrostatic pressure (GHP) and restore the glomerular filtration rate (GFR) to normal?

- A) The afferent arteriole will vasoconstrict.
- B) The afferent arteriole will vasodilate.
- C) The afferent arteriole has no effect on GHP and GFR.
- D) The afferent arteriole will vasoconstrict, then vasodilate.

Answer: <https://biology-forums.com/index.php?topic=501918>

Question 267

What is a major function of the endocrine system?

- A) The endocrine system communicates directly with target cells through the use of neurotransmitters.
- B) The endocrine system releases hormones into the bloodstream to reach receptors on target cells.
- C) The endocrine system produces immediate, short-lasting effects.
- D) The endocrine system secretes products into ducts that lead to body surfaces or cavities.

Answer: <https://biology-forums.com/index.php?topic=500942>

Question 268

What does the SQ3R method stand for?

- A) search, quiet, research, read, and remember
- B) share, quiz, query, question, and read
- C) survey, question, read, recite, and review
- D) sort, query, read, recite, and review

Answer: <https://biology-forums.com/index.php?topic=498161>

Question 269

Hematopoiesis occurs in both the red and yellow marrow of bones.

Answer: <https://biology-forums.com/index.php?topic=498808>

Question 270

In laboratory, you will study the overall structure and shape of the femur bone without the aid of a microscope. This is a study known as:

- A) regional anatomy.
- B) microscopic anatomy.
- C) systemic anatomy.
- D) gross anatomy.

Answer: <https://biology-forums.com/index.php?topic=498171>

Question 271

Which of the following implants in, or attaches to, the endometrium of the uterus?

- A) embryo
- B) secondary oocyte
- C) blastocyst
- D) fetus

Answer: <https://biology-forums.com/index.php?topic=511299>

Question 272

What channels open or close in response to physical distortion of the membrane surface, such as vibrations or pressure?

- A) voltage-gated
- B) chemically-gated
- C) mechanically-gated
- D) ligand-gated

Answer: <https://biology-forums.com/index.php?topic=500416>

Question 273

When NAD⁺ is _____ it becomes NADH.

- A) reduced
- B) catabolized
- C) oxidized
- D) hydrolyzed

Answer: <https://biology-forums.com/index.php?topic=501769>

Question 274

What makes lymphatic vessels similar to the venous circuit of the cardiovascular system?

- A) Both vessels operate under high pressure.
- B) Both vessels feed into capillary beds.
- C) Both vessels have valves.
- D) Both vessels have a thick tunica media.

Answer: <https://biology-forums.com/index.php?topic=501399>

Question 275

The visceral motor division (autonomic nervous system) controls the body's voluntary motor functions.

Answer: <https://biology-forums.com/index.php?topic=500689>

Question 276

The three types of myofilaments are thin, thick and elastic.

Answer: <https://biology-forums.com/index.php?topic=500366>

Question 277

Summarize the principle of complementarity of structure and function.

Answer: <https://biology-forums.com/index.php?topic=498253>

Question 278

What is the last process to occur in the epiphyseal plate?

- A) maturation
- B) proliferation
- C) ossification
- D) calcification

Answer: <https://biology-forums.com/index.php?topic=498783>

Question 279

What do vellus hairs lack?

- A) pigment
- B) cortex
- C) keratin
- D) cuticle

Answer: <https://biology-forums.com/index.php?topic=498690>

Question 280

Which muscle provides voluntary control of defecation?

- A) levator ani
- B) external urinary sphincter
- C) deep transverse perineal muscle
- D) external anal sphincter

Answer: <https://biology-forums.com/index.php?topic=500221>

Question 281

Summarize the differences between intramembranous and endochondral ossification.

Answer: <https://biology-forums.com/index.php?topic=498824>

Question 282

Which of the following is under control of the parasympathetic nervous system?

- A) emission
- B) ejaculation
- C) erection
- D) expulsion

Answer: <https://biology-forums.com/index.php?topic=511210>

Question 283

What organ secretes most of the plasma proteins?

- A) brain
- B) pancreas
- C) liver
- D) spleen

Answer: <https://biology-forums.com/index.php?topic=501309>

Question 284

The embryonic period of prenatal development occurs from week 3 until week 8.

Answer: <https://biology-forums.com/index.php?topic=511377>

Question 285

In a female, follicle-stimulating hormone (FSH) and luteinizing hormone (LH) target the:

- A) anterior pituitary gland.
- B) hypothalamus.
- C) ovaries.
- D) uterus.

Answer: <https://biology-forums.com/index.php?topic=511234>

Question 286

What hormones are made by the posterior pituitary?

- A) No hormones are made by the posterior pituitary.
- B) antidiuretic hormone (ADH) and oxytocin
- C) releasing and inhibiting hormones
- D) stimulating hormones

Answer: <https://biology-forums.com/index.php?topic=500961>

Question 287

Cells that ingest foreign substances, microorganisms, and dead and damaged cells are:

- A) adipocytes.
- B) mast cells.
- C) phagocytes.
- D) fibroblasts.

Answer: <https://biology-forums.com/index.php?topic=498574>

Question 288

Cells can respond to _____ hormone(s) at the same time.

- A) only one
- B) a few
- C) several hundred
- D) an unlimited number of

Answer: <https://biology-forums.com/index.php?topic=500945>

Question 289

Which branch of the autonomic nervous system (ANS) includes the vagus nerves, which innervate the thoracic and abdominal viscera?

- A) sensory nervous system
- B) parasympathetic nervous system
- C) somatic nervous system
- D) sympathetic nervous system

Answer: <https://biology-forums.com/index.php?topic=500742>

Question 290

Which of the following is NOT a function of the skin?

- A) thermoregulation
- B) sensation
- C) protection
- D) vitamin A synthesis

Answer: <https://biology-forums.com/index.php?topic=498653>

Question 291

A directional term that means the same as posterior is:

- A) dorsal.
- B) anterior.
- C) ventral.
- D) sagittal.

Answer: <https://biology-forums.com/index.php?topic=498181>

Question 292

Serous fluid lubricates around organs and reduces friction as the organ moves against adjacent structures.

Answer: <https://biology-forums.com/index.php?topic=498225>

Question 293

Immunoglobulins are also known as:

- A) memory cells.
- B) antigens.
- C) antibodies.
- D) agglutinogens.

Answer: <https://biology-forums.com/index.php?topic=501444>

Question 294

Explain how scratching a chaffing label on a shirt is an example of a negative feedback loop.

Answer: <https://biology-forums.com/index.php?topic=498272>

Question 295

Epinephrine is produced by:

- A) zona fasciculata of the adrenal cortex.
- B) chromaffin cells of the adrenal medulla.
- C) chief cells of the parathyroid glands.
- D) zona glomerulosa of the adrenal cortex.

Answer: <https://biology-forums.com/index.php?topic=501004>

Question 296

Which hormone stimulates the acinar cells of the pancreas to secrete digestive enzymes?

- A) cholecystokinin (CCK)
- B) insulin
- C) secretin
- D) glucagon

Answer: <https://biology-forums.com/index.php?topic=501700>

Question 297

Synovial joints are different from cartilaginous and fibrous joints due to the presence of a joint (synovial) cavity.

Answer: <https://biology-forums.com/index.php?topic=499034>

Question 298

What purpose do gap junctions serve in cardiac and smooth muscle tissues?

Answer: <https://biology-forums.com/index.php?topic=500389>

Question 299

What happens in oxidation-reduction (redox) reactions?

- A) Electron exchange occurs.
- B) Larger molecules are built from smaller subunits.
- C) Energy is used since these are endergonic reactions.
- D) Atoms are exchanged.

Answer: <https://biology-forums.com/index.php?topic=498304>

Question 300

Which part of the coxal bone articulates with the sacrum?

- A) ischium
- B) ilium
- C) pubis
- D) both ischium and pubis

Answer: <https://biology-forums.com/index.php?topic=498905>

Question 301

Branches that may occur along an axon are called:

- A) hillocks.
- B) collaterals.
- C) telodendria.
- D) dendrites.

Answer: <https://biology-forums.com/index.php?topic=500400>

Question 302

The radial tuberosity is the site of the attachment for the deltoid muscle.

Answer: <https://biology-forums.com/index.php?topic=498931>

Question 303

In the laboratory, your professor presents a bone for study. She explains it has a diaphysis and epiphyses. Determine the type of bone, by shape, that she has presented and explain how you came to your conclusion.

Answer: <https://biology-forums.com/index.php?topic=498816>

Question 304

Chemical messengers released by endocrine glands to regulate some functions of other cells are known as:

- A) electrolytes.
- B) neurotransmitters.
- C) antibodies.
- D) hormones.

Answer: <https://biology-forums.com/index.php?topic=500944>

Question 305

How many tetrads form during synapsis of meiosis for humans?

- A) 4
- B) 23
- C) 46
- D) 98

Answer: <https://biology-forums.com/index.php?topic=511185>

Question 306

Which nerve of the brachial plexus becomes inflamed, resulting in carpal tunnel syndrome? Explain what regions are served by this inflamed nerve.

Answer: <https://biology-forums.com/index.php?topic=500727>

Question 307

What are the two primary curvatures seen in the vertebral column of a fetus?

- A) cervical and thoracic
- B) thoracic and lumbar
- C) cervical and sacral
- D) thoracic and sacral

Answer: <https://biology-forums.com/index.php?topic=498880>

Question 308

What neurotransmitter is released by the axon of a sympathetic preganglionic neuron to communicate with the sympathetic postganglionic neuron?

- A) adrenalin
- B) norepinephrine
- C) acetylcholine
- D) epinephrine

Answer: <https://biology-forums.com/index.php?topic=500749>

Question 309

During depolarization, the membrane potential becomes more positive.

Answer: <https://biology-forums.com/index.php?topic=500467>

Question 310

As a result of the increase of testosterone at puberty for males:

- A) osteoblasts increase the rate of bone resorption.
- B) appositional bone growth increases.
- C) intramembranous ossification increases.
- D) epiphyseal plates widen rapidly.

Answer: <https://biology-forums.com/index.php?topic=498788>

Question 311

What type of hormone is made from cholesterol?

- A) protein hormone
- B) amine hormone
- C) steroid hormone
- D) peptide hormone

Answer: <https://biology-forums.com/index.php?topic=500949>

Question 312

Which hormone suppresses uterine contractions until birth?

- A) human chorionic gonadotropin (hCG)
- B) human placental lactogen (hPL)
- C) melanocyte-stimulating hormone (MSH)
- D) relaxin

Answer: <https://biology-forums.com/index.php?topic=511346>

Question 313

What is the role of RNA polymerase in transcription?

- A) RNA polymerase signals the end of the mRNA molecule.
- B) RNA polymerase catalyzes the unwinding of the DNA double helix.
- C) RNA polymerase binds the DNA promoter and builds an mRNA molecule.
- D) RNA polymerase carries the code for the amino acid in a sequence of nucleotides.

Answer: <https://biology-forums.com/index.php?topic=498450>

Question 314

Explain how you distinguish between dense regular collagenous connective tissue and dense irregular connective tissue if viewing these tissues through a microscope.

Answer: <https://biology-forums.com/index.php?topic=498619>

Question 315

The lymph ducts in the thoracic cavity drain into the:

- A) inferior vena cava.
- B) junction of the internal jugular vein and subclavian vein.
- C) external jugular veins.
- D) junction of the brachiocephalic vein and the superior vena cava.

Answer: <https://biology-forums.com/index.php?topic=501397>

Question 316

List and describe the connective tissue sheaths that make up a nerve.

Answer: <https://biology-forums.com/index.php?topic=500703>

Question 317

What cell is responsible for mucus secretion?

- A) adipocyte
- B) goblet cell
- C) fibroblast
- D) mast cell

Answer: <https://biology-forums.com/index.php?topic=498572>

Question 318

At the splenic flexure, the colon becomes the:

- A) ascending colon.
- B) transverse colon.
- C) sigmoid colon.
- D) descending colon.

Answer: <https://biology-forums.com/index.php?topic=501689>

Question 319

Explain how mucosa-associated lymphatic tissues (MALT) complement the function of the lymph nodes in the lymphatic system.

Answer: <https://biology-forums.com/index.php?topic=501526>

Question 320

Jamessa is performing a blood typing experiment in her anatomy and physiology lab. She takes a few drops of her own blood sample and mixes it with different antibodies. Her blood agglutinates when mixed with the anti-B antibodies, but it does not agglutinate with the anti-A or anti-Rh antibodies. Determine her blood type and explain how you came to this conclusion.

Answer: <https://biology-forums.com/index.php?topic=501392>

Question 321

Four year old Susie loves carrots. Her skin has turned orange from a pigment found in carrots called beta carotene. Briefly explain how long it will take for Susie's skin to return to its normal color.

Answer: <https://biology-forums.com/index.php?topic=498724>

Question 322

Sierra says she learns more from reading the textbook for class than from sitting in lecture. She must be a(n):

- A) visual/verbal learner.
- B) tactile/kinesthetic learner.
- C) visual/nonverbal learner.
- D) auditory/verbal learner.

Answer: <https://biology-forums.com/index.php?topic=498159>

Question 323

A contractile cell with a membrane potential of 0 mV is experiencing the:

- A) initial repolarization phase.
- B) plateau phase.
- C) rapid depolarization phase.
- D) repolarization phase.

Answer: <https://biology-forums.com/index.php?topic=501109>

Question 324

What is NOT a function of macrophages?

- A) Macrophages activate T lymphocytes (T cells).
- B) Macrophages kill ingested pathogens with chemicals.
- C) Macrophages serve as antigen-presenting cells.
- D) Macrophages secrete substances onto pathogens that are too large to ingest.

Answer: <https://biology-forums.com/index.php?topic=501421>

Question 325

Rods are concentrated in the fovea centralis while cones are absent from this region of the retina.

Answer: <https://biology-forums.com/index.php?topic=500910>

Question 326

The autonomic nervous system carries signals to cardiac muscle, smooth muscle, and glands.

Answer: <https://biology-forums.com/index.php?topic=500462>

Question 327

Where is the primary gustatory cortex located?

- A) occipital lobe
- B) parietal lobe
- C) temporal lobe

D) frontal lobe

Answer: <https://biology-forums.com/index.php?topic=500844>

Question 328

Determine the effect of inadequate insulin on the absorptive state.

- A) Blood glucose levels will decrease.
- B) Anabolic processes will be impaired.
- C) Glycogenolysis will release glucose into the blood.
- D) Gluconeogenesis will release glucose into the blood.

Answer: <https://biology-forums.com/index.php?topic=501812>

Question 329

Mr. Schmitzer has pulmonary fibrosis in which the elastic tissue of his lungs is replaced with dense irregular collagenous connective tissue. His condition primarily affects:

- A) airway resistance.
- B) alveolar surface tension.
- C) pulmonary compliance.
- D) surfactant production.

Answer: <https://biology-forums.com/index.php?topic=501571>

Question 330

The parasympathetic nervous system prepares the eye for:

- A) age-related deterioration.
- B) near vision.
- C) changing light levels.
- D) distance vision.

Answer: <https://biology-forums.com/index.php?topic=500784>

Question 331

Describe how light is refracted and focused on the retina in an emmetropic eye.

Answer: <https://biology-forums.com/index.php?topic=500925>

Question 332

The respiratory membrane is a combination of the respiratory bronchioles, alveolar ducts and alveolar sacs.

Answer: <https://biology-forums.com/index.php?topic=501631>

Question 333

Which vessels serve as the blood reservoirs of the body?

- A) metarterioles
- B) arterioles
- C) muscular arteries
- D) veins

Answer: <https://biology-forums.com/index.php?topic=501199>

Question 334

What cells contribute to the process of calcification during intramembranous ossification?

- A) osteoblasts
- B) keratinocytes
- C) osteoclasts
- D) osteocytes

Answer: <https://biology-forums.com/index.php?topic=498773>

Question 335

The external urinary sphincter provides involuntary control of urination.

Answer: <https://biology-forums.com/index.php?topic=500258>

Question 336

Through what openings of the nose does inhaled air enter the upper respiratory tract?

- A) nasal cavity

- B) anterior nares
- C) posterior nares
- D) nasopharynx

Answer: <https://biology-forums.com/index.php?topic=501537>

Question 337

Explain how changes in position of the glottis and larynx during swallowing (deglutition) prevent the aspiration of food into the larynx.

Answer: <https://biology-forums.com/index.php?topic=501738>

Question 338

List the four core principles that relate to homeostasis.

Answer: <https://biology-forums.com/index.php?topic=498252>

Question 339

What supports the spiral organ (organ of Corti)?

- A) tectorial membrane
- B) basilar membrane
- C) membranous labyrinth
- D) tympanic membrane

Answer: <https://biology-forums.com/index.php?topic=500884>

Question 340

A lever system works at a mechanical advantage when:

- A) the fulcrum is located closer to the applied force.
- B) a small load is to be moved.
- C) the fulcrum is located farther from the applied force.
- D) the fulcrum is equally situated between the load and the force.

Answer: <https://biology-forums.com/index.php?topic=500195>

Question 341

The parasympathetic nervous system is often known as the "rest and digest" division of the ANS.

Answer: <https://biology-forums.com/index.php?topic=500795>

Question 342

Outline the main events of the phases of the uterine (menstrual) cycle.

Answer: <https://biology-forums.com/index.php?topic=511282>

Question 343

Resting membrane potential is due to unequal concentrations of:

- A) acids and bases.
- B) ions.
- C) water molecules.
- D) phospholipids and proteins.

Answer: <https://biology-forums.com/index.php?topic=498418>

Question 344

The storage and release of calcium ions is the key function of the:

- A) sarcolemma.
- B) sarcoplasm.
- C) mitochondrion.
- D) sarcoplasmic reticulum.

Answer: <https://biology-forums.com/index.php?topic=500291>

Question 345

The initial stimulus for labor comes from the:

- A) maternal ovaries.
- B) maternal uterus.
- C) fetus.
- D) maternal hypothalamus.

Answer: <https://biology-forums.com/index.php?topic=511350>

Question 346

Which hormone promotes gluconeogenesis as a way to increase blood glucose levels?

- A) melatonin
- B) insulin
- C) aldosterone
- D) cortisol

Answer: <https://biology-forums.com/index.php?topic=501001>

Question 347

A tRNA molecule carries an anticodon which is complementary to a specific mRNA codon.

Answer: <https://biology-forums.com/index.php?topic=498498>

Question 348

Which nervous system primarily controls and increases salivation?

- A) submucosal nervous system
- B) enteric nervous system
- C) sympathetic nervous system
- D) parasympathetic nervous system

Answer: <https://biology-forums.com/index.php?topic=501659>

Question 349

List the bones that form the orbit.

Answer: <https://biology-forums.com/index.php?topic=498940>

Question 350

Define activation energy (E_a).

Answer: <https://biology-forums.com/index.php?topic=498360>

Question 351

Describe the role of skin in thermoregulation.

Answer: <https://biology-forums.com/index.php?topic=498721>

Question 352

After a chlamydia infection, Mrs. Jones developed scar tissue in her uterine tubes. Determine why she is at a higher risk for an ectopic (tubal) pregnancy in her uterine tubes.

Answer: <https://biology-forums.com/index.php?topic=511289>

Question 353

The rearrangement and migration of the cells of the bilaminar embryonic disc forms the trilaminar embryonic disc in a process called:

- A) fertilization.
- B) gastrulation.
- C) formation of the blastula.
- D) organogenesis.

Answer: <https://biology-forums.com/index.php?topic=511320>

Question 354

Which nervous system dilates the pupils and allows more light to enter the eyes?

- A) somatic nervous system
- B) sympathetic nervous system
- C) parasympathetic nervous system
- D) sensory nervous system

Answer: <https://biology-forums.com/index.php?topic=500766>

Question 355

Where are the central chemoreceptors located?

- A) medullary reticular formation

- B) carotid arteries
- C) aorta
- D) both the carotid arteries and the aorta

Answer: <https://biology-forums.com/index.php?topic=501599>

Question 356

The placenta, a temporary organ that is shed after the infant is born, is the site of exchange of oxygen, nutrients, and waste between the mother and fetus.

Answer: <https://biology-forums.com/index.php?topic=511383>

Question 357

Which group is an antagonist to the hamstrings group?

- A) quadriceps femoris group
- B) gluteal muscle group
- C) adductor muscle group
- D) iliopsoas muscle group

Answer: <https://biology-forums.com/index.php?topic=500237>

Question 358

Resting membrane potential is maintained by the Na⁺/K⁺ pump which brings:

- A) two potassium ions into the cytosol and three sodium ions into the extracellular fluid.
- B) three potassium ions into the cytosol and three sodium ions into the extracellular fluid.
- C) two potassium ions into the cytosol and two sodium ions into the extracellular fluid.
- D) three potassium ions into the cytosol and two sodium ions into the extracellular fluid.

Answer: <https://biology-forums.com/index.php?topic=500415>

Question 359

List at least three muscles that contribute to smiling.

Answer: <https://biology-forums.com/index.php?topic=500267>

Question 360

Summarize the process of phagocytosis.

Answer: <https://biology-forums.com/index.php?topic=498475>

Question 361

If the stapedius muscle is unable to reduce movement of the ossicles as a unit, how is hearing affected?

- A) We hear no sound.
- B) Sounds will be softer than normal.
- C) Sounds will be louder than normal.
- D) Hearing is not affected.

Answer: <https://biology-forums.com/index.php?topic=500877>

Question 362

Thermoregulation is the responsibility of:

- A) thyroid hormones.
- B) thyroid-stimulating hormone (TSH).
- C) parathyroid hormone (PTH).
- D) calcitonin.

Answer: <https://biology-forums.com/index.php?topic=500978>

Question 363

What ion triggers synaptic vesicles to release neurotransmitters into the synaptic cleft?

- A) sodium
- B) calcium
- C) magnesium
- D) chlorine

Answer: <https://biology-forums.com/index.php?topic=500443>

Question 364

The process of male gamete, or sperm cell, development is known as:

- A) mitosis.
- B) spermatogenesis.
- C) fertilization.
- D) oogenesis.

Answer: <https://biology-forums.com/index.php?topic=511199>

Question 365

The hip is known as the:

- A) glenohumeral joint.
- B) coxal joint.
- C) tibiofemoral joint.
- D) humeroulnar joint.

Answer: <https://biology-forums.com/index.php?topic=499027>

Question 366

Describe the histology of the three layers of the uterus.

Answer: <https://biology-forums.com/index.php?topic=511277>

Question 367

Coronary circulation involves the delivery of oxygenated blood to the:

- A) liver.
- B) heart.
- C) lungs.
- D) brain.

Answer: <https://biology-forums.com/index.php?topic=501084>

Question 368

Platelets are cell fragments formed from:

- A) myeloblasts.
- B) megakaryocytes.
- C) monoblasts.
- D) lymphocytes.

Answer: <https://biology-forums.com/index.php?topic=501342>

Question 369

Why is a neuron unable to produce an additional action potential during the absolute refractory period?

Answer: <https://biology-forums.com/index.php?topic=500484>

Question 370

The release of urea in the urine is a mechanism for the body to rid itself of:

- A) fatty acids.
- B) ammonia.
- C) ketone bodies.
- D) creatinine.

Answer: <https://biology-forums.com/index.php?topic=501801>

Question 371

Describe the relationship between agonists and antagonists.

Answer: <https://biology-forums.com/index.php?topic=500265>

Question 372

When a skeletal muscle fiber contracts:

- A) the H zone and I bands narrow.
- B) the A bands shorten while the I bands lengthen.
- C) Z discs move farther apart while the A bands shorten.
- D) the H zone narrows while the I bands widen.

Answer: <https://biology-forums.com/index.php?topic=500302>

Question 373

Determine the direction in which an electrical signal is carried in a typical multipolar neuron.

- A) dendrites, cell body, axon
- B) axon, cell body, dendrites
- C) dendrites, axon, cell body
- D) cell body, axon, dendrites

Answer: <https://biology-forums.com/index.php?topic=500399>

Question 374

Which pancreatic cells release insulin and glucagon?

- A) pancreatic islets (islets of Langerhans)
- B) acinar cells
- C) chief cells
- D) chromaffin cells

Answer: <https://biology-forums.com/index.php?topic=501007>

Question 375

What is the first step of bone repair?

- A) primary bone is replaced with secondary bone
- B) hematoma formation
- C) soft callus formation
- D) bone callus formation

Answer: <https://biology-forums.com/index.php?topic=498801>

Question 376

Kelly fell while ice skating and injured her scaphoid bone. What region of her body was injured?

- A) ankle
- B) wrist
- C) shoulder
- D) finger

Answer: <https://biology-forums.com/index.php?topic=498902>

Question 377

What do fibroblasts contribute to bone repair?

- A) Fibroblasts form new collagen fibers to bridge the gap between bone fragments.
- B) Fibroblasts direct the transition from primary bone to secondary bone.
- C) Fibroblasts secrete hyaline cartilage to form a soft callus.
- D) Fibroblasts form the hematoma that involves a mass of blood cells.

Answer: <https://biology-forums.com/index.php?topic=498804>

Question 378

Melanocyte-stimulating hormone (MSH) is needed for the maturation of the fetal lungs and the production of surfactant.

Answer: <https://biology-forums.com/index.php?topic=511389>

Question 379

Edna complains of weight gain, cold intolerance, and low blood pressure. What disorder do her symptoms match?

- A) Graves' disease
- B) hyperthyroidism
- C) exophthalmos
- D) hypothyroidism

Answer: <https://biology-forums.com/index.php?topic=500983>

Question 380

Calorimetry is used to measure the basal metabolic rate (BMR).

Answer: <https://biology-forums.com/index.php?topic=501852>

Question 381

What is the most common type of leukocyte in a healthy adult?

- A) basophil
- B) lymphocyte
- C) neutrophil
- D) eosinophil

Answer: <https://biology-forums.com/index.php?topic=501330>

Question 382

Dr. Mitchell performs open heart surgery. The incision he makes through the sternal region of his patient divides the thoracic cavity into equal left and right parts. This incision must be made along a:

- A) sagittal plane.
- B) midsagittal (median) plane.
- C) transverse (horizontal) plane.
- D) frontal (coronal) plane.

Answer: <https://biology-forums.com/index.php?topic=498191>

Question 383

Place the following parts of the cardiac conduction system in the order in which they transmit the action potential.

- 1) atrioventricular (AV) bundle
- 2) Purkinje fibers
- 3) sinoatrial (SA) node
- 4) right and left bundle branches
- 5) contractile cells of cardiac muscle tissue
- 6) atrioventricular (AV) node

A) 3, 1, 6, 4, 2, 5

B) 3, 1, 6, 4, 5, 2

C) 3, 6, 1, 4, 2, 5

D) 3, 6, 4, 1, 2, 5

Answer: <https://biology-forums.com/index.php?topic=501118>

Question 384

The process of red blood cell production is known as:

- A) polycythemia.
- B) erythropoiesis.
- C) erythropenia.
- D) erythrocytosis.

Answer: <https://biology-forums.com/index.php?topic=501322>

Question 385

Suppressed ventilation from brainstem dysfunction leads to a pH imbalance known as metabolic acidosis.

Answer: <https://biology-forums.com/index.php?topic=511158>

Question 386

The glomerular filtration rate is defined as:

- A) the percent of blood plasma that passes through the filtration membrane.
- B) the amount of filtrate formed by both kidneys in one minute.
- C) the amount of filtrate that is reabsorbed during a 24-hour period.
- D) the rate at which the kidneys remove a substance from the blood.

Answer: <https://biology-forums.com/index.php?topic=501916>

Question 387

The nerve gas, sarin, was used during World War II as chemical warfare. Sarin inhibits the effects of acetylcholinesterase at the synapse. Predict how sarin will affect excitation.

Answer: <https://biology-forums.com/index.php?topic=500385>

Question 388

Which ligament anchors the ovary to the uterus?

- A) broad ligament
- B) ovarian ligament
- C) infundibulopelvic ligament
- D) suspensory ligament

Answer: <https://biology-forums.com/index.php?topic=511217>

Question 389

Explain how you would distinguish a granulocyte from an agranulocyte if viewing these cells through a microscope.

Answer: <https://biology-forums.com/index.php?topic=501379>

Question 390

List the two types of cartilaginous joints and provide examples of each type.

Answer: <https://biology-forums.com/index.php?topic=500166>

Question 391

Mrs. Lee has been diagnosed with pleurisy affecting the pleura surrounding her lungs. Determine the type of membrane affected and describe its structure.

Answer: <https://biology-forums.com/index.php?topic=498626>

Question 392

Discuss why anatomical position is used.

Answer: <https://biology-forums.com/index.php?topic=498254>

Question 393

People suspected of having a stroke can be asked to stick their tongues straight out. A slanted or somewhat bent tongue may be just one indicator of stroke. Determine the cranial nerve affected if the tongue is bent or slanted and identify the nerve as sensory, motor, or mixed. Describe the function of this nerve.

Answer: <https://biology-forums.com/index.php?topic=500725>

Question 394

During month 4 of prenatal development, the fetus turns upside down in the vertex position.

Answer: <https://biology-forums.com/index.php?topic=511384>

Question 395

Explain the purpose of a neuronal pool.

Answer: <https://biology-forums.com/index.php?topic=500492>

Question 396

Explain how cortisol helps mediate the body's response to stress.

Answer: <https://biology-forums.com/index.php?topic=501053>

Question 397

Tightly coiled DNA molecules present during cell division are known as:

- A) chromosomes.
- B) the nucleoplasm.
- C) the nucleosome.
- D) the nuclear envelope.

Answer: <https://biology-forums.com/index.php?topic=498438>

Question 398

A drug known as a beta-blocker should primarily affect:

- A) heart rate.
- B) dilation of the pupils.
- C) sweating.
- D) bronchodilation.

Answer: <https://biology-forums.com/index.php?topic=500761>

Question 399

Cancer cells can suppress T cell activity by releasing:

- A) cytokines.
- B) perforins.
- C) pyrogens.

D) opsonins.

Answer: <https://biology-forums.com/index.php?topic=501482>

Question 400

The upper respiratory tract includes the passageways from the nasal cavity to the larynx.

Answer: <https://biology-forums.com/index.php?topic=501623>

Question 401

Which pH represents a solution that has the highest concentration of hydroxide ions?

- A) pH 1
- B) pH 7
- C) pH 10
- D) pH 14

Answer: <https://biology-forums.com/index.php?topic=498319>

Question 402

Which of the following occurs if body temperature rises above normal?

- A) Sweat gland activity decreases.
- B) The activity of melanocytes increases.
- C) Evaporative cooling decreases.
- D) Blood flow to the dermis increases.

Answer: <https://biology-forums.com/index.php?topic=498658>

Question 403

Type I, or immediate, hypersensitivity triggers plasma cells to secrete:

- A) IgM
- B) IgD
- C) IgE
- D) IgA

Answer: <https://biology-forums.com/index.php?topic=501483>

Question 404

Which type of synovial joint is the simplest and least mobile?

- A) plane joint
- B) saddle joint
- C) ball-and-socket joint
- D) hinge joint

Answer: <https://biology-forums.com/index.php?topic=499011>

Question 405

The function of the sarcoplasmic reticulum (SR) is to store and release calcium ions.

Answer: <https://biology-forums.com/index.php?topic=500364>

Question 406

What vessels typically carry blood away from the heart?

- A) venules
- B) arteries
- C) veins
- D) capillaries

Answer: <https://biology-forums.com/index.php?topic=501192>

Question 407

The palatine bone contributes to the structure of the:

- A) paranasal sinus.
- B) hard palate.
- C) cheekbone.
- D) soft palate.

Answer: <https://biology-forums.com/index.php?topic=498868>

Question 408

There are two phases of the cardiac cycle in which all four heart valves are open: isovolumetric contraction phase and the isovolumetric relaxation phase.

Answer: <https://biology-forums.com/index.php?topic=501162>

Question 409

Explain the three types of stimuli that regulate hormone secretion.

Answer: <https://biology-forums.com/index.php?topic=501043>

Question 410

Simple squamous epithelium is found lining the:

- A) air sacs of the lungs.
- B) nasal cavity.
- C) uterine tubes of a female.
- D) urinary bladder.

Answer: <https://biology-forums.com/index.php?topic=498561>

Question 411

Items reclaimed during tubular reabsorption are moved to the interstitial fluids and then to the:

- A) blood.
- B) renal pelvis.
- C) minor calyx.
- D) collecting system.

Answer: <https://biology-forums.com/index.php?topic=501905>

Question 412

Which of the following pacemaker cell populations has the fastest intrinsic rate of depolarization at about 60 times per minute?

- A) atrioventricular (AV) node
- B) atrioventricular (AV) bundle
- C) sinoatrial (SA) node
- D) Purkinje fiber system

Answer: <https://biology-forums.com/index.php?topic=501115>

Question 413

Explain gastrulation and summarize the germ layers produced during this process.

Answer: <https://biology-forums.com/index.php?topic=511400>

Question 414

Peristaltic contractions that propel the contents of the colon toward the distal large intestine are:

- A) defecation.
- B) segmentation.
- C) mass movements.
- D) haustral contractions.

Answer: <https://biology-forums.com/index.php?topic=501695>

Question 415

The thin descending limb of the nephron loop is permeable to water, and not very permeable to solutes, in order to increase the concentration of the filtrate as it reaches the bottom of the loop.

Answer: <https://biology-forums.com/index.php?topic=501981>

Question 416

What valve prevents the backflow of blood from the right ventricle into the right atrium?

- A) right atrioventricular valve (tricuspid valve)
- B) pulmonary valve
- C) left atrioventricular valve (mitral or bicuspid valve)
- D) aortic valve

Answer: <https://biology-forums.com/index.php?topic=501097>

Question 417

Which of the following innervates target cells or organs of the autonomic nervous system (ANS)?

- A) preganglionic neuron
- B) autonomic ganglion
- C) somatic motor neuron
- D) postganglionic neuron

Answer: <https://biology-forums.com/index.php?topic=500741>

Question 418

Mr. Pey frequently takes antacids, which contain bicarbonate salts, to battle his upset stomach. Determine the type of acid-base imbalance created by frequent antacid consumption and predict the compensation for his problem.

Answer: <https://biology-forums.com/index.php?topic=511179>

Question 419

Pulmonary gas exchange occurs in the:

- A) upper respiratory tract.
- B) respiratory zone.
- C) conducting zone.
- D) larynx.

Answer: <https://biology-forums.com/index.php?topic=501536>

Question 420

Receptors that bind acetylcholine are known as:

- A) alpha.
- B) adrenergic.
- C) beta.
- D) cholinergic.

Answer: <https://biology-forums.com/index.php?topic=500753>

Question 421

Alcohol inhibits the release of antidiuretic hormone (ADH, or vasopressin) from the posterior pituitary. Determine why alcohol is a poor choice for rehydration when we are thirsty.

Answer: <https://biology-forums.com/index.php?topic=501056>

Question 422

The loudness of sound is determined by the vibrations of the:

- A) scala vestibuli.
- B) otoliths.
- C) basilar membrane.
- D) tectorial membrane.

Answer: <https://biology-forums.com/index.php?topic=500887>

Question 423

Archie took several deep breaths of air. By breathing deeply, what mechanism did he assist to return blood to his heart?

- A) respiratory pump
- B) mean arterial pressure (MAP)
- C) skeletal muscle pump
- D) Korotkoff sounds

Answer: <https://biology-forums.com/index.php?topic=501216>

Question 424

Which letter represents the deltoid tuberosity on this image?

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=498896>

Question 425

What is the advantage of breathing through the nose rather than the mouth?

- A) The nose warms, humidifies, and filters inhaled air.
- B) The nose provides a more direct route over which air will travel.
- C) The nose provides a site for initial gas exchange.
- D) The nose is a less turbulent environment than the mouth.

Answer: <https://biology-forums.com/index.php?topic=501538>

Question 426

Which description best matches the location of white matter?

- A) In both the brain and spinal cord, white matter is superficial.
- B) In the spinal cord, white matter is deep while cerebral white matter is superficial.
- C) In both the brain and spinal cord, white matter is deep.
- D) In the spinal cord, white matter is superficial while cerebral white matter is deep.

Answer: <https://biology-forums.com/index.php?topic=500503>

Question 427

Simple diffusion requires:

- A) a concentration gradient.
- B) the use of energy.
- C) protein channels.
- D) carrier proteins.

Answer: <https://biology-forums.com/index.php?topic=498403>

Question 428

Is a single sperm cell capable of fertilizing a secondary oocyte alone? Explain.

Answer: <https://biology-forums.com/index.php?topic=511397>

Question 429

The most important stimulus that induces changes in ventilation is:

- A) partial pressure of oxygen in systemic capillaries.
- B) partial pressure of carbon dioxide in arterial blood.
- C) partial pressure of oxygen in venous blood.
- D) partial pressure of oxygen in pulmonary capillaries.

Answer: <https://biology-forums.com/index.php?topic=501598>

Question 430

What molecule cannot be used for gluconeogenesis?

- A) glucogenic amino acids
- B) fatty acid
- C) pyruvate
- D) glycerol

Answer: <https://biology-forums.com/index.php?topic=501806>

Question 431

Activated B cells differentiate into:

- A) plasma cells and memory B cells.
- B) effector cells and memory T cells.
- C) antibodies and memory B cells.
- D) plasma cells and effector cells.

Answer: <https://biology-forums.com/index.php?topic=501447>

Question 432

The lumbar nerve plexuses arise from the anterior rami of L1 - L4 and innervate structures of the pelvis and lower limb.

Answer: <https://biology-forums.com/index.php?topic=500694>

Question 433

Which cells release hydrochloric acid (HCl) into the stomach?

- A) parietal cells
- B) chief cells
- C) enteroendocrine cells
- D) mucous neck cells

Answer: <https://biology-forums.com/index.php?topic=501670>

Question 434

What is the main function of glucagon?

- A) regulate blood pressure
- B) regulate sodium and potassium ion levels
- C) lower blood glucose levels
- D) raise blood glucose levels

Answer: <https://biology-forums.com/index.php?topic=501008>

Question 435

All red blood cells in an adult originate in the:

- A) heart.
- B) liver.
- C) red bone marrow.
- D) spleen.

Answer: <https://biology-forums.com/index.php?topic=501318>

Question 436

What is a renal mechanism that raises systemic blood pressure?

- A) increase secretion of renin by the juxtaglomerular (JG) cells
- B) decrease secretion of aldosterone
- C) increase release of angiotensin-II (A-II)
- D) increase filtration into the glomerular capsule

Answer: <https://biology-forums.com/index.php?topic=501926>

Question 437

Epinephrine is controlled by neural stimuli since it is released from the adrenal medulla in response to signals from the nervous system.

Answer: <https://biology-forums.com/index.php?topic=501030>

Question 438

Mechanoreceptors might detect which of the following sensations?

- A) smell
- B) pressure
- C) temperature
- D) light

Answer: <https://biology-forums.com/index.php?topic=500661>

Question 439

Determine the effect of hypokalemia on resting membrane potential.

- A) Hypokalemia has no effect on resting membrane potential.
- B) Hypokalemia promotes a more positive resting membrane potential.
- C) Hypokalemia causes the membrane potential to become depolarized.
- D) Hypokalemia causes the membrane potential to become hyperpolarized.

Answer: <https://biology-forums.com/index.php?topic=502029>

Question 440

Solutions with a pH less than 7 are considered basic or alkaline.

Answer: <https://biology-forums.com/index.php?topic=498378>

Question 441

Rabies is caused by a virus that attacks the central nervous system. The virus is normally introduced by an animal bite that breaks the surface of the skin. Since the virus is not motile, how does it travel to the central nervous system?

Answer: <https://biology-forums.com/index.php?topic=500476>

Question 442

Explain why it is critical for sutures to operate functionally as synarthroses as the cranial bones mature.

Answer: <https://biology-forums.com/index.php?topic=499045>

Question 443

The striations in cardiac muscle cells are modified gap junctions that unite the cells and permit the heart to contract as a unit.

Answer: <https://biology-forums.com/index.php?topic=498637>

Question 444

Hyperventilation is the compensation for an acid-base imbalance known as:

- A) respiratory acidosis.
- B) respiratory alkalosis.
- C) metabolic acidosis.
- D) metabolic alkalosis.

Answer: <https://biology-forums.com/index.php?topic=511136>

Question 445

Exposure to UV radiation causes the skin to darken by increasing the production of:

- A) hemoglobin.
- B) keratin.
- C) collagen.
- D) melanin.

Answer: <https://biology-forums.com/index.php?topic=498684>

Question 446

Which extrinsic eye muscles move the eye inferiorly?

- A) superior oblique and inferior rectus
- B) lateral rectus and inferior oblique
- C) inferior oblique and superior rectus
- D) inferior oblique and inferior rectus

Answer: <https://biology-forums.com/index.php?topic=500848>

Question 447

What part of the femur articulates with the tibia to form the knee joint?

- A) medial malleolus and lateral malleolus
- B) medial epicondyle and lateral epicondyle
- C) greater trochanter and lesser trochanter
- D) medial condyle and lateral condyle

Answer: <https://biology-forums.com/index.php?topic=498913>

Question 448

Determine the effects on fluid movement and capillary net filtration pressure when a liver disorder prevents adequate formation of plasma proteins, such as albumin.

Answer: <https://biology-forums.com/index.php?topic=501298>

Question 449

Explain how a lever system can work at a mechanical disadvantage but still be useful in moving a load. What type of lever system fits this description?

Answer: <https://biology-forums.com/index.php?topic=500281>

Question 450

What movement would you expect to see in a pivot joint?

- A) opposition
- B) flexion
- C) rotation
- D) abduction

Answer: <https://biology-forums.com/index.php?topic=499015>

Question 451

Select the two factors upon which body mass index depends.

- A) muscle mass and fat mass
- B) height and weight
- C) body type and physical activity
- D) ethnicity and sex

Answer: <https://biology-forums.com/index.php?topic=501837>

Question 452

What do vascular spasms contribute to the process of hemostasis?

- A) Vascular spasms cause activated platelets to release the contents of their granules.
- B) Vascular spasms cause platelets to adhere to exposed collagen.
- C) Vascular spasms transform fibrinogen into fibrin.
- D) Vascular spasms decrease blood vessel diameter to limit blood loss.

Answer: <https://biology-forums.com/index.php?topic=501345>

Question 453

Tiesha has been sick for weeks. When her complete blood count (CBC) was examined, she had higher than normal levels of neutrophils. Provide a reason for why Tiesha experienced an increase in neutrophils that may explain her illness.

Answer: <https://biology-forums.com/index.php?topic=501380>

Question 454

Which hormones of the HPA axis stimulate the synthesis of epinephrine by chromaffin cells?

- A) gonadotropin-releasing hormone (GnRH)
- B) growth hormone-releasing hormone (GHRH)
- C) thyrotropic-releasing hormone (TRH)
- D) adrenocorticotrophic hormone (ACTH)

Answer: <https://biology-forums.com/index.php?topic=501006>

Question 455

The fusion of the pronuclei can occur after the oocyte completes:

- A) capacitation.
- B) meiosis I.
- C) meiosis II.
- D) mitosis.

Answer: <https://biology-forums.com/index.php?topic=511305>

Question 456

What cardiovascular changes are NOT typically expected in a pregnant female?

- A) increased cardiac output
- B) increased blood pressure
- C) decreased hematocrit
- D) varicose veins

Answer: <https://biology-forums.com/index.php?topic=511348>

Question 457

What type of non-phagocytic cell mediates inflammation?

- A) natural killer (NK) cell
- B) neutrophil
- C) eosinophil
- D) basophil

Answer: <https://biology-forums.com/index.php?topic=501423>

Question 458

Fetal heart rate and respiratory rate are both lower than those of adults.

Answer: <https://biology-forums.com/index.php?topic=511392>

Question 459

Discuss the role of calcium ions in the transmission of an action potential at the synapse.

Answer: <https://biology-forums.com/index.php?topic=500486>

Question 460

What are the two major methods by which cells communicate to coordinate their functions?

- A) effectors and responses
- B) temperature gradients and pressure gradients
- C) chemical messengers and/or electrical signals
- D) positive feedback loops and negative feedback loops

Answer: <https://biology-forums.com/index.php?topic=498215>

Question 461

To what part of the brain are both general and most special senses carried?

- A) pons
- B) medulla oblongata
- C) thalamus
- D) hypothalamus

Answer: <https://biology-forums.com/index.php?topic=500826>

Question 462

Sensory information from proprioceptors about joint and muscle positions are carried to the brain by the:

- A) reticulospinal tract.
- B) anterolateral system (spinothalamic tracts).
- C) vestibulospinal tract.
- D) spinocerebellar tracts.

Answer: <https://biology-forums.com/index.php?topic=500549>

Question 463

Describe the role of calcium in the regulation of the troponin-tropomyosin complex.

Answer: <https://biology-forums.com/index.php?topic=500354>

Question 464

Peripheral chemoreceptors are most sensitive to:

- A) partial pressure of oxygen in arterial blood.
- B) concentration of hydrogen ions in the blood.
- C) partial pressure of carbon dioxide in the blood.
- D) concentration of hydrogen ions in cerebrospinal fluid.

Answer: <https://biology-forums.com/index.php?topic=501600>

Question 465

Discuss the role of effector in both the negative and positive feedback loops.

Answer: <https://biology-forums.com/index.php?topic=498251>

Question 466

In the human body, what is the fulcrum in a lever system?

- A) The fulcrum is the joint at which movement occurs.
- B) The fulcrum is the effort generated by muscle contractions.
- C) The fulcrum is the weight of the body part being moved.
- D) The fulcrum is the angle of the movement.

Answer: <https://biology-forums.com/index.php?topic=500191>

Question 467

Determine the mean arterial pressure (MAP) given a systolic pressure of 130 mm Hg and diastolic pressure of 70 mm Hg.

- A) 70 mm Hg
- B) 90 mm Hg
- C) 130 mm Hg
- D) 200 mm Hg

Answer: <https://biology-forums.com/index.php?topic=501213>

Question 468

Through a dehydration synthesis reaction, a phosphate is added to ADP. What product is formed?

- A) AMP
- B) DNA
- C) ATP
- D) 2ADP

Answer: <https://biology-forums.com/index.php?topic=498349>

Question 469

Explain how leak channels and gated channels differ.

Answer: <https://biology-forums.com/index.php?topic=500481>

Question 470

What is a major function of potassium ions in the body?

- A) activating enzymes
- B) forming hydroxyapatite salts in osseous tissue
- C) maintaining resting potential of neurons and muscle cells
- D) maintaining osmotic pressure in the extracellular fluid (ECF)

Answer: <https://biology-forums.com/index.php?topic=502025>

Question 471

Blood cells are made in the red bone marrow of bones, a process known as:

- A) bone resorption.
- B) hematopoiesis.
- C) osteoporosis.
- D) ossification.

Answer: <https://biology-forums.com/index.php?topic=498743>

Question 472

If a cell has 18 chromosomes and undergoes mitosis, how many chromosomes would each daughter cell have?

- A) 9
- B) 18
- C) 36
- D) 72

Answer: <https://biology-forums.com/index.php?topic=498464>

Question 473

Which movement opposes adduction?

- A) flexion
- B) extension
- C) rotation
- D) abduction

Answer: <https://biology-forums.com/index.php?topic=498999>

Question 474

Discuss the differences between declarative memory and non-declarative memory.

Answer: <https://biology-forums.com/index.php?topic=500613>

Question 475

What is the most potent stimulus of the thirst mechanism?

- A) osmolarity of the plasma
- B) increased blood pressure
- C) increased plasma volume
- D) atrial natriuretic peptide (ANP)

Answer: <https://biology-forums.com/index.php?topic=502011>

Question 476

The majority of carbon dioxide is transported:

- A) as carbaminohemoglobin.
- B) dissolved in plasma.
- C) as the bicarbonate ion.
- D) as carbonic acid.

Answer: <https://biology-forums.com/index.php?topic=501588>

Question 477

Which of the following does NOT correctly depict the effects of parathyroid hormone (PTH)?

- A) PTH stimulates the intestines to absorb calcium ions.
- B) PTH stimulates osteoclast activity.
- C) PTH decreases blood calcium ion concentration.
- D) PTH weakens the bones.

Answer: <https://biology-forums.com/index.php?topic=498800>

Question 478

Which of the following vessels gives rise to the common hepatic artery, left gastric artery, and splenic artery?

- A) intestinal arteries
- B) superior epigastric artery
- C) celiac trunk
- D) superior mesenteric artery

Answer: <https://biology-forums.com/index.php?topic=501247>

Question 479

Summarize the female secondary sex characteristics.

Answer: <https://biology-forums.com/index.php?topic=511281>

Question 480

What do you expect to see if the activity of the reticular formation is decreased?

- A) fever
- B) decreased level of consciousness
- C) increased level of consciousness
- D) increased metabolism

Answer: <https://biology-forums.com/index.php?topic=500570>

Question 481

Subcutaneous injections involve administration of medicine into the:

- A) epidermis.
- B) papillary layer of the dermis.
- C) reticular layer of the dermis.
- D) hypodermis.

Answer: <https://biology-forums.com/index.php?topic=498650>

Question 482

List the four ligaments associated with the knee joint.

Answer: <https://biology-forums.com/index.php?topic=500173>

Question 483

What of the following best summarizes the principle of complementarity of structure and function?

- A) maintenance of a stable internal environment
- B) structure drives function
- C) function follows structure
- D) form follows function

Answer: <https://biology-forums.com/index.php?topic=498212>

Question 484

Describe the structures and functions of the two layers that compose the pericardium surrounding the heart.

Answer: <https://biology-forums.com/index.php?topic=501169>

Question 485

Excess proteins from a high-protein diet cannot be stored as fat.

Answer: <https://biology-forums.com/index.php?topic=501850>

Question 486

Filtrate traveling through the renal tubule travels from the thick ascending limb to the:

- A) proximal tubule.
- B) thick descending limb of the nephron loop (loop of Henle).
- C) distal tubule.
- D) thin ascending limb of the nephron loop (loop of Henle).

Answer: <https://biology-forums.com/index.php?topic=501900>

Question 487

Spermiogenesis is the process of sperm cell development. It includes all phases of meiosis and spermatogenesis, the cytoplasmic changes required to form a mature sperm cell.

Answer: <https://biology-forums.com/index.php?topic=511259>

Question 488

What bones meet at the lambdoid suture?

- A) each temporal bone and each zygomatic bone
- B) the frontal bone and parietal bones
- C) the occipital bone and parietal bones
- D) each temporal bone and each parietal bone

Answer: <https://biology-forums.com/index.php?topic=498863>

Question 489

Explain the effect of the parasympathetic nervous system on cardiac muscle cells.

Answer: <https://biology-forums.com/index.php?topic=500816>

Question 490

Explain the role of the podocytes in the filtration membrane of the glomerulus.

Answer: <https://biology-forums.com/index.php?topic=501958>

Question 491

Damage to the sustentacular cells of the testes could impair:

- A) FSH and LH production.
- B) production of estrogens.
- C) spermatogenesis.
- D) oogenesis.

Answer: <https://biology-forums.com/index.php?topic=511203>

Question 492

The falciform ligament separates the:

- A) right and left lobes of the liver.
- B) quadrate and right lobes of the liver.
- C) caudate and quadrate lobes of the liver.
- D) liver from the gallbladder.

Answer: <https://biology-forums.com/index.php?topic=501702>

Question 493

Is N₂ a molecule or a compound? Explain.

Answer: <https://biology-forums.com/index.php?topic=498355>

Question 494

Through the microscope, you notice a tissue that has an apical surface, multiple layers, and flattened cells near the apical surface. Determine both the general and specific type of tissue you have observed and explain how you came to your conclusion.

Answer: <https://biology-forums.com/index.php?topic=498613>

Question 495

What type of bone is adapted to withstand stresses arriving from many directions?

- A) spongy bone
- B) compact bone
- C) osteon bone
- D) lamellar bone

Answer: <https://biology-forums.com/index.php?topic=498768>

Question 496

What type of fiber carries information from the frontal lobe of the right cerebral hemisphere to the occipital lobe of the same cerebral hemisphere?

- A) corpus callosum
- B) projection fibers
- C) commissural fibers
- D) association fibers

Answer: <https://biology-forums.com/index.php?topic=500528>

Question 497

Discuss the two main factors to influence conduction speed of an action potential.

Answer: <https://biology-forums.com/index.php?topic=500485>

Question 498

Susie raised her eyebrows and dropped her jaw open in excitement when she walked in to her surprise birthday party. Determine and describe the muscles involved in these facial expressions.

Answer: <https://biology-forums.com/index.php?topic=500282>

Question 499

Which blood type carries anti-A antibodies in the plasma?

- A) B-
- B) AB+
- C) A-
- D) A+

Answer: <https://biology-forums.com/index.php?topic=501359>

Question 500

Each of the following is typical of urine EXCEPT:

- A) a pH of 3.0.
- B) yellow color.
- C) translucency.
- D) mild odor.

Answer: <https://biology-forums.com/index.php?topic=501941>

Question 501

Which statement best describes a bursa?

- A) A bursa is composed of hyaline cartilage that provides a smooth surface on which bones articulate.
- B) A bursa is a synovial fluid-filled structure lined with synovial membrane on its inner surface.
- C) A bursa connects one bone to another bone to strengthen and reinforce articulating bones.
- D) A bursa is a structural component of skeletal muscle composed of dense regular collagenous connective tissue.

Answer: <https://biology-forums.com/index.php?topic=498990>

Question 502

The pharynx is known as the voice box due to the presence of vocal ligaments that vibrate to produce sound.

Answer: <https://biology-forums.com/index.php?topic=501625>

Question 503

Amino acids are the monomers for:

- A) proteins.
- B) carbohydrates.
- C) lipids.
- D) nucleic acids.

Answer: <https://biology-forums.com/index.php?topic=498341>

Question 504

Which law states that each gas in a mixture exerts its own pressure?

- A) Dalton's law
- B) Charles' law
- C) Boyle's law
- D) Henry's law

Answer: <https://biology-forums.com/index.php?topic=501576>

Question 505

Which two organ systems include the pancreas as a component?

- A) digestive and urinary systems
- B) endocrine and lymphatic systems
- C) digestive and endocrine systems
- D) respiratory and cardiovascular systems

Answer: <https://biology-forums.com/index.php?topic=498175>

Question 506

Discuss the naming scheme and location of the external oblique, internal oblique, and transversus abdominis muscles.

Answer: <https://biology-forums.com/index.php?topic=500271>

Question 507

Multiple sclerosis (MS) is a disease in which the myelin sheaths are destroyed in the brain and spinal cord. With what process does this interfere and what would be the consequences?

Answer: <https://biology-forums.com/index.php?topic=500494>

Question 508

The thymus is a component of both the endocrine and lymphatic systems.

Answer: <https://biology-forums.com/index.php?topic=498221>

Question 509

Explain what is meant when a pregnant woman says her "water has broken." Discuss the stage of labor during which this event occurs.

Answer: <https://biology-forums.com/index.php?topic=511417>

Question 510

Symphysis joints provide no movement and are functionally classified as synarthroses.

Answer: <https://biology-forums.com/index.php?topic=499032>

Question 511

A patient has a high level of pyrogens, indicating that she:

- A) is feeling achy.
- B) has swollen lymph nodes.
- C) has a fever.
- D) has a sore throat.

Answer: <https://biology-forums.com/index.php?topic=501430>

Question 512

What separates the outer ear from the middle ear?

- A) pharyngotympanic tube
- B) auricle
- C) tympanic membrane
- D) auditory ossicles

Answer: <https://biology-forums.com/index.php?topic=500873>

Question 513

Determine the functional joint classification that provides the greatest mobility.

- A) diarthrosis
- B) synarthrosis

C) amphiarthrosis

D) cartilaginous

Answer: <https://biology-forums.com/index.php?topic=498960>

Question 514

Secretin, gastric-inhibitory peptide (GIP), somatostatin, and the enterogastric reflex increase acid secretion by the stomach.

Answer: <https://biology-forums.com/index.php?topic=501727>

Question 515

The type of feedback that increases or enhances the effects of the variable is:

A) neutral.

B) negative.

C) positive.

D) responsive.

Answer: <https://biology-forums.com/index.php?topic=498211>

Question 516

During osmosis, water moves toward:

A) the highest solute concentration.

B) the lowest osmotic pressure.

C) the lowest solute concentration.

D) the solution with more water molecules.

Answer: <https://biology-forums.com/index.php?topic=498409>

Question 517

All target cells:

A) have receptors to which hormones bind.

B) are found in the blood.

C) secrete hormones.

D) produce their own hormones.

Answer: <https://biology-forums.com/index.php?topic=500946>

Question 518

Where can pronation and supination occur?

A) thumb or first carpometacarpal joint

B) atlantoaxial joint

C) mandible and maxilla

D) proximal radioulnar joint of the forearm

Answer: <https://biology-forums.com/index.php?topic=499006>

Question 519

The simple stretch reflex employs mechanoreceptors known as Golgi tendon organs to detect the degree of stretch experienced by a muscle.

Answer: <https://biology-forums.com/index.php?topic=500701>

Question 520

Define adaptation as it relates to sensory function. What types of mechanoreceptors adapt?

Answer: <https://biology-forums.com/index.php?topic=500717>

Question 521

Myelinated axons in the CNS are known as:

A) internodes.

B) gray matter.

C) white matter.

D) dark matter.

Answer: <https://biology-forums.com/index.php?topic=500412>

Question 522

Mrs. Laurenz learned during her appointment that she would be scheduled for a C-section. She is in her 36th week of pregnancy. Explain to her what happens during a C-section.

Answer: <https://biology-forums.com/index.php?topic=511409>

Question 523

What is NOT an effect of parathyroid hormone (PTH)?

- A) increased release of calcium ions from bone
- B) increased osteoblast activity
- C) increased absorption of calcium ions by the small intestine
- D) increased reabsorption of calcium ions from fluid in the kidneys

Answer: <https://biology-forums.com/index.php?topic=500987>

Question 524

Functionally, how are cartilaginous joints classified?

- A) synarthroses or diarthroses
- B) amphiarthroses or diarthroses
- C) synarthroses or amphiarthroses
- D) fibrous or synovial

Answer: <https://biology-forums.com/index.php?topic=498965>

Question 525

Which hormone stimulates the synthesis of steroid hormones by the adrenal gland?

- A) prolactin-inhibiting factor
- B) thyrotropin-releasing hormone (TRH)
- C) adrenocorticotropic hormone (ACTH)
- D) corticotropin-releasing hormone (CRH)

Answer: <https://biology-forums.com/index.php?topic=500970>

Question 526

Determine the effects to blood flow if a heart attack has caused damaged to the left side of the heart.

Answer: <https://biology-forums.com/index.php?topic=501168>

Question 527

What best describes the Broca's area?

- A) Broca's area is housed in the temporal and parietal lobes.
- B) Broca's area houses personality, decorum, and behavior.
- C) Broca's area is usually found in the right cerebral hemisphere.
- D) Broca's area is a premotor area for speech sounds.

Answer: <https://biology-forums.com/index.php?topic=500519>

Question 528

What type of learner performs best with study groups?

- A) tactile/kinesthetic learner
- B) visual/verbal learner
- C) visual/nonverbal learner
- D) any type of visual learner

Answer: <https://biology-forums.com/index.php?topic=498164>

Question 529

Determine when the fetal lungs begin producing surfactant and explain why it is important.

Answer: <https://biology-forums.com/index.php?topic=511405>

Question 530

Which of the following does NOT occur during the embryonic period?

- A) gastrulation
- B) organogenesis
- C) formation of the placenta
- D) implantation

Answer: <https://biology-forums.com/index.php?topic=511321>

Question 531

On the pH scale, which number has the highest concentration of hydrogen ions?

- A) pH 1
- B) pH 5
- C) pH 7
- D) pH 10

Answer: <https://biology-forums.com/index.php?topic=498316>

Question 532

Briefly explain the key difference between synovial joints and other types of joints (fibrous and cartilaginous).

Answer: <https://biology-forums.com/index.php?topic=500168>

Question 533

Transcribe mRNA from this strand of DNA.

- T A C G G T A G T
- A) A U G C C A U C A
 - B) A T G C C A T C A
 - C) U A G C C U A C U
 - D) U T G C C U T G U

Answer: <https://biology-forums.com/index.php?topic=498446>

Question 534

Explain how agglutination is a different process from coagulation.

Answer: <https://biology-forums.com/index.php?topic=501390>

Question 535

The fusion of sperm and egg is known as:

- A) meiosis.
- B) cleavage.
- C) mitosis.
- D) fertilization.

Answer: <https://biology-forums.com/index.php?topic=511184>

Question 536

The process of building protein from amino acids produces water. Describe the type of reaction used to build muscles.

Answer: <https://biology-forums.com/index.php?topic=498389>

Question 537

Explain how a type I, or immediate, hypersensitivity is different from a typical primary immune response.

Answer: <https://biology-forums.com/index.php?topic=501525>

Question 538

What best describes lymphatic capillaries?

- A) impermeable
- B) transport blood
- C) extremely permeable
- D) two-way circuit to and from the heart

Answer: <https://biology-forums.com/index.php?topic=501402>

Question 539

A base is a hydrogen ion acceptor while an acid is a hydrogen ion donor.

Answer: <https://biology-forums.com/index.php?topic=498377>

Question 540

Ginger wears glasses to see distant objects when she drives. She does not need glasses to see objects that are close. Determine the refractive problem she has and how her glasses correct this problem.

Answer: <https://biology-forums.com/index.php?topic=500936>

Question 541

Discuss macronutrients, micronutrients, and essential nutrients.

Answer: <https://biology-forums.com/index.php?topic=501871>

Question 542

Growing new muscle proteins through the assembly of amino acids is a type of dehydration synthesis reaction.

Answer: <https://biology-forums.com/index.php?topic=498379>

Question 543

Urine dripping from a renal pyramid passes first into the major calyx then into the minor calyx.

Answer: <https://biology-forums.com/index.php?topic=501971>

Question 544

Jerry is an alcoholic and does not eat enough food. He has been diagnosed with a vitamin deficiency. What blood disorder is the most likely a result of this deficiency?

- A) hemolytic anemia
- B) aplastic anemia
- C) iron-deficiency anemia
- D) pernicious anemia

Answer: <https://biology-forums.com/index.php?topic=501328>

Question 545

Charlie has a break in the shaft of his thigh bone. He broke the:

- A) epiphyseal plate.
- B) diaphysis.
- C) epiphysis.
- D) articular cartilage.

Answer: <https://biology-forums.com/index.php?topic=498749>

Question 546

Cognition is best described as:

- A) recognizing, processing, planning, and responding to stimuli.
- B) encoding and storing learned information in our neural circuitry.
- C) a reversible and normal suspension of consciousness.
- D) the ability to comprehend and produce words.

Answer: <https://biology-forums.com/index.php?topic=500571>

Question 547

Which of the following is a cartilaginous joint?

- A) gomphosis
- B) syndesmosis
- C) synchondrosis
- D) suture

Answer: <https://biology-forums.com/index.php?topic=498976>

Question 548

Jorge tried to pick up his sofa but discover that it is much heavier than he expected. What must occur in the muscle to increase tension so he can pick up this heavy piece of furniture?

- A) tetanic spasm
- B) recruitment of additional motor units
- C) pliometric contraction
- D) isotonic eccentric contractions

Answer: <https://biology-forums.com/index.php?topic=500334>

Question 549

The most superficial layer of the dermis is the:

- A) stratum basale.
- B) hypodermis.
- C) reticular layer.
- D) papillary layer.

Answer: <https://biology-forums.com/index.php?topic=498677>

Question 550

What separates the oral cavity from the nasal cavity?

- A) periodontal ligament
- B) extrinsic and intrinsic muscles
- C) hard palate and soft palate
- D) labial frenulum and lingual frenulum

Answer: <https://biology-forums.com/index.php?topic=501654>

Question 551

The activation of olfactory receptors requires that the odorant become immersed in:

- A) mucus.
- B) blood.
- C) cerumen.
- D) saliva.

Answer: <https://biology-forums.com/index.php?topic=500831>

Question 552

The following represents the main locations fluids are found in the human body. Rank these body fluids in order from the fluid that accounts for most in the human body to the fluid that accounts for the least.

- A) plasma, cytosol (intracellular fluid), interstitial fluid
- B) cytosol (intracellular fluid), interstitial fluid, plasma
- C) interstitial fluid, cytosol (intracellular fluid), plasma
- D) cytosol (intracellular fluid), plasma, interstitial fluid

Answer: <https://biology-forums.com/index.php?topic=501999>

Question 553

The most important chemical buffer system in the blood is the carbonic acid—bicarbonate ion buffer system, which consists of the weak acid carbonic acid and its weak conjugate base, the bicarbonate ion.

Answer: <https://biology-forums.com/index.php?topic=511157>

Question 554

Which pressure is created by the presence of large proteins in the blood, such as albumin?

- A) interstitial fluid hydrostatic pressure
- B) hydrostatic pressure
- C) colloid osmotic pressure
- D) interstitial fluid osmotic pressure

Answer: <https://biology-forums.com/index.php?topic=501237>

Question 555

Explain the difference between a ramus and a plexus.

Answer: <https://biology-forums.com/index.php?topic=500707>

Question 556

Mixed nerves house:

- A) sensory neurons only.
- B) motor neurons only.
- C) somatic neurons only.
- D) both sensory and motor neurons.

Answer: <https://biology-forums.com/index.php?topic=500626>

Question 557

Which portion of the penis is called the foreskin?

- A) prepuce
- B) root
- C) body
- D) glans penis

Answer: <https://biology-forums.com/index.php?topic=511193>

Question 558

A mutation has changed the sequence in a codon from UGG to UGA. Using the codon chart provided in this figure, determine the change in the amino acid sequence.

- A) from tryptophan to stop
- B) from glycine to glutamine
- C) from threonine to threonine
- D) from start to stop

Answer: <https://biology-forums.com/index.php?topic=498445>

Question 559

Which of the following is NOT a nutrient monomer used by the body to generate ATP?

- A) nucleic acids
- B) glucose
- C) fatty acids
- D) amino acids

Answer: <https://biology-forums.com/index.php?topic=501761>

Question 560

The main immediate source of ATP (lasting about 10 seconds) as muscle contractions begin comes from:

- A) glucose.
- B) glycogen.
- C) creatine phosphate.
- D) fat.

Answer: <https://biology-forums.com/index.php?topic=500319>

Question 561

What part of a feedback loop causes physiological responses to return the variable to the normal homeostatic range?

- A) receptor (sensor)
- B) stimulus
- C) effector
- D) control center

Answer: <https://biology-forums.com/index.php?topic=498205>

Question 562

Although both the shoulder and hip are ball-and-socket joints, the hip is more stable because of its role in weight bearing and locomotion.

Answer: <https://biology-forums.com/index.php?topic=499040>

Question 563

Which of the following is a yellow-orange skin pigment?

- A) melanin
- B) hemoglobin
- C) carotene
- D) cyanide

Answer: <https://biology-forums.com/index.php?topic=498686>

Question 564

Which of the following is the first phase of the ovarian cycle?

- A) menstrual phase
- B) luteal phase
- C) follicular phase
- D) ovarian phase

Answer: <https://biology-forums.com/index.php?topic=511231>

Question 565

The vastus lateralis, vastus medialis, and vastus intermedius muscles insert on the:

- A) linea aspera of the femur.
- B) greater trochanter of the femur.
- C) patella and tibial tuberosity of the tibia.

D) superior margin of the acetabulum.

Answer: <https://biology-forums.com/index.php?topic=500239>

Question 566

Trace the pathway of air into the respiratory system.

Answer: <https://biology-forums.com/index.php?topic=501604>

Question 567

The indentation on the medial surface of the kidney is the:

- A) pelvis.
- B) hilum.
- C) pyramid.
- D) calyx.

Answer: <https://biology-forums.com/index.php?topic=501884>

Question 568

Where does the conscious awareness of sound begin, along with the analysis of its pitch, location, and loudness?

- A) frontal lobe
- B) parietal lobe
- C) occipital lobe
- D) temporal lobe

Answer: <https://biology-forums.com/index.php?topic=500891>

Question 569

Motor neurons pools consist of:

- A) upper motor neurons.
- B) primary afferent neurons.
- C) secondary afferent neurons.
- D) lower motor neurons.

Answer: <https://biology-forums.com/index.php?topic=500674>

Question 570

Determine the type of muscle contraction needed to lower a heavy bowling ball down by your side so you can roll it down the lane.

Answer: <https://biology-forums.com/index.php?topic=500360>

Question 571

Where does fertilization usually occur?

- A) isthmus of the uterine tube
- B) ampulla of the uterine tube
- C) infundibulum of the uterine tube
- D) uterus

Answer: <https://biology-forums.com/index.php?topic=511301>

Question 572

Which of the following is an example of a syndesmosis?

- A) the interosseous membrane situated between the radius and ulna in the forearm
- B) the coronal suture between the frontal and parietal bones
- C) the pubic symphysis located between the two pubic bones of the pelvic girdle
- D) a tooth and its corresponding pocket or alveolus in the mandible or maxilla

Answer: <https://biology-forums.com/index.php?topic=498973>

Question 573

Which statement best describes enzyme function?

- A) One enzyme can work on thousands of different substrates.
- B) Enzymes can perform catabolic reactions only.
- C) Enzymes speed chemical reactions by lowering the activation energy.
- D) Enzymes chemically alter both the reactants and products.

Answer: <https://biology-forums.com/index.php?topic=498308>

Question 574

Hormones only affect certain types of cells known as target cells.

Answer: <https://biology-forums.com/index.php?topic=501027>

Question 575

Salts are held together by:

- A) single covalent bonds.
- B) nonpolar covalent bonds.
- C) polar covalent bonds.
- D) ionic bonds.

Answer: <https://biology-forums.com/index.php?topic=498327>

Question 576

What produces the "lub dub" heart sounds?

- A) the contraction of the atria, and then the ventricles
- B) the relaxation of the atria, and then the ventricles
- C) the sound of blood traveling through the heart
- D) the vibrations of the ventricular and blood vessel walls when valves shut

Answer: <https://biology-forums.com/index.php?topic=501132>

Question 577

Thick skin lacks:

- A) hair follicles.
- B) stratum lucidum.
- C) sweat glands.
- D) stratum granulosum.

Answer: <https://biology-forums.com/index.php?topic=498672>

Question 578

The process of respiration that moves air into and out of the lungs is:

- A) gas transport.
- B) tissue gas exchange.
- C) pulmonary gas exchange.
- D) pulmonary ventilation.

Answer: <https://biology-forums.com/index.php?topic=501535>

Question 579

Explain why the oropharynx and laryngopharynx are lined with nonkeratinized stratified squamous epithelium rather than pseudostratified ciliated columnar epithelium.

Answer: <https://biology-forums.com/index.php?topic=501608>

Question 580

Where are pathogens filtered from lymph?

- A) lymph nodes
- B) tonsils
- C) spleen
- D) lacteals

Answer: <https://biology-forums.com/index.php?topic=501410>

Question 581

Absorption is best described as the:

- A) elimination of feces and some metabolic wastes.
- B) passage of foods and liquids from one digestive organ to the next.
- C) reactions that break chemical bonds of food particles.
- D) movement of food particles through the wall of the alimentary canal.

Answer: <https://biology-forums.com/index.php?topic=501645>

Question 582

The coronary sinus does NOT receive blood from the:

- A) brachiocephalic vein.
- B) great cardiac vein.
- C) middle cardiac vein.
- D) small cardiac vein.

Answer: <https://biology-forums.com/index.php?topic=501088>

Question 583

What pigment is derived from vitamin A?

- A) photopsin
- B) retinal
- C) opsin
- D) transducin

Answer: <https://biology-forums.com/index.php?topic=500863>

Question 584

When environmental factors influence gene expression, this is referred to as:

- A) polygenic inheritance.
- B) multifactorial inheritance.
- C) codominance.
- D) multiple alleles.

Answer: <https://biology-forums.com/index.php?topic=511376>

Question 585

Hyposecretion of both aldosterone and cortisol results in:

- A) Hashimoto's thyroiditis
- B) Graves' disease
- C) Cushing's disease
- D) Addison's disease

Answer: <https://biology-forums.com/index.php?topic=501003>

Question 586

Which of the following is a gonadotropin?

- A) adrenocorticotrophic hormone (ACTH)
- B) thyrotropin-releasing hormone (TRH)
- C) follicle-stimulating hormone (FSH)
- D) corticotropin-releasing hormone (CRH)

Answer: <https://biology-forums.com/index.php?topic=500971>

Question 587

What initiates the micturition reflex?

- A) The external urethral sphincter relaxes.
- B) Parasympathetic efferent fibers stimulate the contraction of the detrusor muscle.
- C) The internal urethral sphincter relaxes.
- D) Stretch receptors in the wall of the urinary bladder signal the sacral region of the spinal cord.

Answer: <https://biology-forums.com/index.php?topic=501949>

Question 588

What is the maturation process in which spermatids elongate and shed excess cytoplasm?

- A) meiosis I
- B) meiosis II
- C) spermiogenesis
- D) spermatogenesis

Answer: <https://biology-forums.com/index.php?topic=511204>

Question 589

What group makes each amino acid unique?

- A) ammonia group
- B) "R" group
- C) amino group

D) carboxylic acid group

Answer: <https://biology-forums.com/index.php?topic=498342>

Question 590

In which kidney region are the renal pyramids located?

- A) renal cortex
- B) renal medulla
- C) renal pelvis
- D) renal sinus

Answer: <https://biology-forums.com/index.php?topic=501887>

Question 591

The volume that remains in the lungs after a forced expiration is the:

- A) residual volume.
- B) dead space volume.
- C) vital capacity.
- D) functional residual capacity.

Answer: <https://biology-forums.com/index.php?topic=501574>

Question 592

Both granulocytes and agranulocytes arise from the lymphoid stem cell line.

Answer: <https://biology-forums.com/index.php?topic=501367>

Question 593

Discuss why pseudostratified ciliated columnar epithelium is an appropriate tissue for the lining of the nasal cavity.

Answer: <https://biology-forums.com/index.php?topic=501607>

Question 594

What joint serves as the fulcrum when triceps brachii moves the forearm?

- A) wrist joint
- B) shoulder joint
- C) elbow joint
- D) metacarpals joint

Answer: <https://biology-forums.com/index.php?topic=500194>

Question 595

As Lisa drove home, she was suddenly alerted to the sound of a blaring horn and realized she had drifted off to sleep. Which nervous system division dominated when she was startled awake?

- A) sensory nervous system
- B) sympathetic nervous system
- C) parasympathetic nervous system
- D) somatic nervous system

Answer: <https://biology-forums.com/index.php?topic=500740>

Question 596

What are the parts of the limbic system and what is the function of this system?

Answer: <https://biology-forums.com/index.php?topic=500599>

Question 597

Amy works in a clinic and has several patients arrive with burns. Describe how she can distinguish between the first-degree and second-degree burns.

Answer: <https://biology-forums.com/index.php?topic=498739>

Question 598

Sheena's B lymphocytes (B cells) produced antibodies to protect her about 3-5 days after she was exposed to a virus. What type of immunity do antibodies provide?

- A) innate immunity
- B) cell-mediated immunity
- C) nonspecific immunity
- D) acquired immunity

Answer: <https://biology-forums.com/index.php?topic=501416>

Question 599

List the three arteries that branch off of the aortic arch.

Answer: <https://biology-forums.com/index.php?topic=501291>

Question 600

Serous membranes line certain cavities within the:

- A) ventral cavities.
- B) cranial cavity.
- C) dorsal cavities.
- D) vertebral (spinal) cavity.

Answer: <https://biology-forums.com/index.php?topic=498200>

Question 601

The shoulder is also known as the:

- A) acromial region.
- B) digital region.
- C) antebrachial region.
- D) brachial region.

Answer: <https://biology-forums.com/index.php?topic=498186>

Question 602

Explain how peristalsis and segmentation in the small intestine differ.

Answer: <https://biology-forums.com/index.php?topic=501745>

Question 603

Ejaculation is accomplished by the parasympathetic nervous system.

Answer: <https://biology-forums.com/index.php?topic=500802>

Question 604

What is NOT part of the inner ear?

- A) cochlea
- B) semicircular canals
- C) vestibule
- D) tympanic membrane

Answer: <https://biology-forums.com/index.php?topic=500879>

Question 605

Explain why Braxton-Hicks contractions are known as false labor.

Answer: <https://biology-forums.com/index.php?topic=511408>

Question 606

Voltage-gated sodium channels are activated:

- A) after voltage-gated potassium channels are activated.
- B) during repolarization.
- C) during hyperpolarization.
- D) only if the cell is depolarized to threshold.

Answer: <https://biology-forums.com/index.php?topic=500433>

Question 607

Briefly explain why AB+ is considered the universal recipient.

Answer: <https://biology-forums.com/index.php?topic=501387>

Question 608

Which of the following is an opening in a bone?

- A) canal (meatus)
- B) trochanter

C) groove (sulcus)

D) condyle

Answer: <https://biology-forums.com/index.php?topic=498856>

Question 609

Explain how to calculate cardiac output (CO).

Answer: <https://biology-forums.com/index.php?topic=501183>

Question 610

Failure of the allantois to fully develop will impact the formation of the:

A) skeletal muscles.

B) urinary bladder.

C) kidneys.

D) digestive tract.

Answer: <https://biology-forums.com/index.php?topic=511314>

Question 611

Mr. Carroll's broken rib pierced through his right lung causing air to enter the intrapleural space. What will happen to his lung, intrapleural pressure and pulmonary pressure?

Answer: <https://biology-forums.com/index.php?topic=501638>

Question 612

Explain the role G-proteins play in taste sensation.

Answer: <https://biology-forums.com/index.php?topic=500919>

Question 613

To what part of the tibia does the patellar ligament attach?

A) medial malleolus

B) medial condyle

C) tibial tuberosity

D) lateral condyle

Answer: <https://biology-forums.com/index.php?topic=498915>

Question 614

Increased sympathetic activity leads to vasodilation and a decrease in blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501270>

Question 615

Determine the effect of inhibin on male hormone production.

A) Inhibin decreases gonadotropin-releasing hormone (GnRH) secretion.

B) Inhibin increases luteinizing hormone (LH) secretion.

C) Inhibin decreases the release of follicle-stimulating hormone (FSH).

D) Inhibin increases testosterone secretion.

Answer: <https://biology-forums.com/index.php?topic=511207>

Question 616

Autonomic motor neurons do NOT innervate:

A) skeletal muscle cells.

B) smooth muscle cells.

C) glands.

D) cardiac muscle cells.

Answer: <https://biology-forums.com/index.php?topic=500732>

Question 617

The formation of a cation and an anion is indicative of a(n):

A) ionic bond.

B) nonpolar bond.

C) polar bond.

D) covalent bond.

Answer: <https://biology-forums.com/index.php?topic=498292>

Question 618

Glucose and fructose are joined through dehydration synthesis to produce:

- A) lactose.
- B) sucrose.
- C) maltose.
- D) galactose.

Answer: <https://biology-forums.com/index.php?topic=498334>

Question 619

Which vessel is guarded by a semilunar valve at its base?

- A) pulmonary trunk
- B) coronary sinus
- C) pulmonary vein
- D) superior vena cava

Answer: <https://biology-forums.com/index.php?topic=501098>

Question 620

Metabolic water (or water of oxidation) amounts to a total gain of about 250 ml of water per day.

Answer: <https://biology-forums.com/index.php?topic=511151>

Question 621

What does the gastric pacemaker regulate?

- A) protein digestion by the stomach
- B) acid production by the stomach
- C) hormone secretion by the stomach
- D) churning and peristalsis of the stomach

Answer: <https://biology-forums.com/index.php?topic=501679>

Question 622

What type of sensory receptors are muscle spindles and Golgi tendon organs?

- A) nociceptor
- B) thermoreceptor
- C) mechanoreceptor
- D) chemoreceptors

Answer: <https://biology-forums.com/index.php?topic=500678>

Question 623

Appositional growth produces:

- A) growth in width.
- B) growth in length.
- C) intramembranous ossification.
- D) endochondral ossification.

Answer: <https://biology-forums.com/index.php?topic=498785>

Question 624

Which of the following accompanies Hashimoto's thyroiditis?

- A) fast heart rate
- B) weight gain
- C) heat intolerance
- D) exophthalmos

Answer: <https://biology-forums.com/index.php?topic=500984>

Question 625

What region of the lymph node contains many mature B cells?

- A) trabeculae
- B) cortex
- C) medulla

D) capsule

Answer: <https://biology-forums.com/index.php?topic=501409>

Question 626

Besides blood, what other fluid returns to the dural sinuses of the brain? To what vein do the dural return these fluids?

Answer: <https://biology-forums.com/index.php?topic=501292>

Question 627

Through which ATP-generating mechanism can long-lasting muscle contractions be sustained?

- A) glycolysis
- B) anaerobic catabolism
- C) creatine phosphate reaction
- D) oxidative catabolism

Answer: <https://biology-forums.com/index.php?topic=500324>

Question 628

Essential nutrients:

- A) are made by the body.
- B) are only obtained through the diet.
- C) include cholesterol.
- D) include most carbohydrates.

Answer: <https://biology-forums.com/index.php?topic=501826>

Question 629

Through the microscope, you see cells swimming. Each cell has a long tail that moves in a whip-like manner. What type of cellular extension have you observed?

- A) cilium
- B) flagellum
- C) centriole
- D) microvillus

Answer: <https://biology-forums.com/index.php?topic=498435>

Question 630

Sarah sensed a mosquito land on her arm and swatted it away with her hand. Which specific PNS division was responsible for the movement of Sarah's hand?

- A) visceral sensory division
- B) somatic sensory division
- C) autonomic nervous system
- D) somatic motor division

Answer: <https://biology-forums.com/index.php?topic=500396>

Question 631

What type of compound is NOT likely to dissolve in water?

- A) ionic compound
- B) polar covalent compound
- C) nonpolar covalent compound
- D) both polar and nonpolar covalent compounds

Answer: <https://biology-forums.com/index.php?topic=498310>

Question 632

If pregnancy occurs, the secretory phase of the uterine (menstrual) cycle continues and the uterus will continue to develop.

Answer: <https://biology-forums.com/index.php?topic=511264>

Question 633

Which capillary would be least likely to allow substances to enter or exit the blood due to tight junctions that join the endothelial cells?

- A) continuous capillaries
- B) closed capillaries
- C) sinusoidal capillaries
- D) fenestrated capillaries

Answer: <https://biology-forums.com/index.php?topic=501231>

Question 634

Explain how thyroid hormones bind with receptors associated with their target cells.

Answer: <https://biology-forums.com/index.php?topic=501048>

Question 635

How long after initial tissue damage does leukocytosis occur?

- A) 2-3 minutes
- B) 2-3 hours
- C) 2-3 days
- D) 2-3 weeks

Answer: <https://biology-forums.com/index.php?topic=501429>

Question 636

Where are neuronal pools located?

- A) within the CNS
- B) within ganglia
- C) within the PNS
- D) within nerves

Answer: <https://biology-forums.com/index.php?topic=500458>

Question 637

What connects the placenta to the fetus?

- A) umbilical cord
- B) chorion
- C) notochord
- D) allantois

Answer: <https://biology-forums.com/index.php?topic=511334>

Question 638

Which statement is TRUE regarding complete proteins?

- A) Complete proteins lack one or more essential amino acids.
- B) Complete proteins can only be obtained from animal proteins.
- C) Complete proteins provide all of the essential amino acids.
- D) Complete proteins can be synthesized from carbon skeletons.

Answer: <https://biology-forums.com/index.php?topic=501832>

Question 639

Which neuropeptide neurotransmitter is released from fibers transmitting sensory information about pain and temperature?

- A) endorphin
- B) substance P
- C) neuropeptide Y
- D) opioids

Answer: <https://biology-forums.com/index.php?topic=500457>

Question 640

The influx of positive charges makes the membrane potential more positive and is known as:

- A) polarization.
- B) repolarization.
- C) depolarization.
- D) hyperpolarization.

Answer: <https://biology-forums.com/index.php?topic=500419>

Question 641

Discuss the relationship between growth hormone (GH) and insulin-like growth factor (IGF).

Answer: <https://biology-forums.com/index.php?topic=501047>

Question 642

All bone growth completely stops by the end of adolescence.

Answer: <https://biology-forums.com/index.php?topic=498813>

Question 643

Complete this analogy: Testes are to gonads as sperm are to:

- A) gametes.
- B) estrogen.
- C) ova.
- D) sex hormones.

Answer: <https://biology-forums.com/index.php?topic=511181>

Question 644

A male bodybuilder takes testosterone supplements to increase his muscle mass. After three weeks, which of the following do you expect to observe?

- A) Excess testosterone inhibits production of gonadotropin-releasing hormone (GnRH).
- B) Excess testosterone increases production of luteinizing hormone (LH).
- C) Excess testosterone increases production of estrogens.
- D) Excess testosterone inhibits production of growth hormone-releasing hormone (GHRH).

Answer: <https://biology-forums.com/index.php?topic=511208>

Question 645

Bone resorption requires the activity of:

- A) osteoblasts.
- B) osteoclasts.
- C) osteocytes.
- D) chondrocytes.

Answer: <https://biology-forums.com/index.php?topic=498790>

Question 646

The small, fluid-filled cavity occupied by an osteocyte is called a(n):

- A) central canal.
- B) lacuna.
- C) osteon.
- D) trabecula.

Answer: <https://biology-forums.com/index.php?topic=498765>

Question 647

Which type of fiber has the largest diameter?

- A) type A
- B) type B
- C) type C
- D) type D

Answer: <https://biology-forums.com/index.php?topic=500437>

Question 648

Explain how glucagon and insulin maintain normal blood glucose levels.

Answer: <https://biology-forums.com/index.php?topic=501055>

Question 649

The three layers of the eyeball, from outer to inner, are:

- A) vascular, neural, and fibrous layers
- B) fibrous, neural, and vascular layers
- C) neural, vascular, and fibrous layers
- D) fibrous, vascular, and neural layers

Answer: <https://biology-forums.com/index.php?topic=500849>

Question 650

Describe the origins and insertions of the masseter and temporalis muscles. What action do these muscles work synergistically to accomplish?

Answer: <https://biology-forums.com/index.php?topic=500269>

Question 651

What lubricates movable joints such as the hip, knee, and elbow?

- A) mucus
- B) serous fluid
- C) synovial fluid
- D) saliva

Answer: <https://biology-forums.com/index.php?topic=498602>

Question 652

The sympathetic nervous system has short preganglionic axons and long postganglionic axons, with the sympathetic ganglia located near the spinal cord.

Answer: <https://biology-forums.com/index.php?topic=500794>

Question 653

Which of the following situations creates edema?

- A) an increase in the colloid osmotic pressure
- B) a decrease in the capillary hydrostatic pressure gradient
- C) a negative net filtration pressure (NFP)
- D) an increase in the capillary hydrostatic pressure gradient

Answer: <https://biology-forums.com/index.php?topic=501242>

Question 654

Which blood vessels experience the sharpest decrease in blood pressure?

- A) systemic arterioles
- B) systemic venules
- C) systemic veins
- D) systemic capillary beds

Answer: <https://biology-forums.com/index.php?topic=501208>

Question 655

What symptom distinguishes a second-degree from a third-degree burn?

- A) presence of significant pain initially with the third-degree burn
- B) presence of erythema associated with the third-degree burn
- C) presence of blisters associated with the third-degree burn
- D) lack of initial pain associated with the third-degree burn

Answer: <https://biology-forums.com/index.php?topic=498702>

Question 656

What best describes the directional term proximal?

- A) toward the head
- B) toward the front
- C) closer to the point of origin
- D) closer to the midline of the body

Answer: <https://biology-forums.com/index.php?topic=498182>

Question 657

Rings of cartilage increase in number while smooth muscle presence decreases as the bronchi branch and become smaller in the conducting zone.

Answer: <https://biology-forums.com/index.php?topic=501627>

Question 658

Identify the structure marked as "3."

- A) collecting duct
- B) proximal tubule
- C) renal corpuscle
- D) distal tubule

Answer: <https://biology-forums.com/index.php?topic=501895>

Question 659

You should wait to read the textbook until you have heard the material presented in lecture or laboratory.

Answer: <https://biology-forums.com/index.php?topic=498219>

Question 660

Explain why the skin appears tanned, or darker, after spending time in the sun.

Answer: <https://biology-forums.com/index.php?topic=498727>

Question 661

What best describes a converging circuit?

- A) One neuron communicates with multiple parts of the brain.
- B) One axon of an input neuron branches to make contact with multiple postsynaptic neurons.
- C) Axon terminals from multiple input neurons join onto a single postsynaptic neuron.
- D) An increasing number of neurons are excited down the pathway of the circuit.

Answer: <https://biology-forums.com/index.php?topic=500460>

Question 662

During which phase of the uterine (menstrual) cycle will stratum functionalis develop with endometrial glands and spiral arteries and veins?

- A) proliferative (preovulatory) phase
- B) secretory (postovulatory) phase
- C) luteal phase
- D) menstrual phase

Answer: <https://biology-forums.com/index.php?topic=511240>

Question 663

The autonomic nervous system does NOT carry signals to:

- A) smooth muscle.
- B) cardiac muscle.
- C) skeletal muscle.
- D) glands.

Answer: <https://biology-forums.com/index.php?topic=500397>

Question 664

What type of postsynaptic potential would be more likely to promote an action potential - an IPSP or EPSP? Explain.

Answer: <https://biology-forums.com/index.php?topic=500487>

Question 665

Alpha and beta receptors are classified as cholinergic receptors.

Answer: <https://biology-forums.com/index.php?topic=500797>

Question 666

Which of the following is a more complex structure than a tissue?

- A) organ
- B) cell
- C) macromolecule
- D) fiber

Answer: <https://biology-forums.com/index.php?topic=498598>

Question 667

You determine a cell to lack both centrioles and mitotic spindle fibers and conclude it will not be able to complete mitosis.

Answer: <https://biology-forums.com/index.php?topic=498499>

Question 668

What statement best describes tidal volume?

- A) Tidal volume is the air remaining in the lungs after forced expiration.
- B) Tidal volume is the air exchanged during normal breathing.
- C) Tidal volume is the air exhaled after normal inspiration.
- D) Tidal volume is the air forcibly expelled after normal expiration.

Answer: <https://biology-forums.com/index.php?topic=501573>

Question 669

Thomas is deaf, but can feel the vibrations of music through sensory receptors in his skin called:

- A) lamellated (Pacinian) corpuscles.
- B) dermal papillae.
- C) Merkel cells.
- D) tactile (Meissner) corpuscles.

Answer: <https://biology-forums.com/index.php?topic=498681>

Question 670

Ovulation is triggered by a surge in:

- A) inhibin.
- B) luteinizing hormone (LH).
- C) progesterone.
- D) testosterone.

Answer: <https://biology-forums.com/index.php?topic=511235>

Question 671

Electron transfer reactions are termed oxidation-_____ reactions.

- A) phosphorylation
- B) hydrolysis
- C) reduction
- D) neutralization

Answer: <https://biology-forums.com/index.php?topic=501770>

Question 672

Hormones that control hormone secretion from other glands are known as:

- A) trophic hormones.
- B) steroid hormones.
- C) tropic hormones.
- D) growth hormones.

Answer: <https://biology-forums.com/index.php?topic=500958>

Question 673

Select the correct relationship between peripheral resistance and blood pressure.

- A) As peripheral resistance increases, blood pressure decreases.
- B) As peripheral resistance decreases, blood pressure increases.
- C) As peripheral resistance increases, blood pressure increases.
- D) Peripheral resistance has no effect on blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501202>

Question 674

Ehlers-Danlos Syndrome is a group of inherited disorders resulting in gene mutations that can cause problems with collagen structure or production. Determine the impact, if any, this disorder will have on stability in synovial joints.

Answer: <https://biology-forums.com/index.php?topic=500178>

Question 675

What is NOT a function of the nervous system?

- A) direct long-term functions such as growth
- B) integrate sensory information
- C) sense the internal and external environments
- D) control effectors

Answer: <https://biology-forums.com/index.php?topic=500390>

Question 676

What type of photoreceptor cell perceives color?

- A) bipolar cell
- B) rod
- C) cone

D) hair cell

Answer: <https://biology-forums.com/index.php?topic=500862>

Question 677

The sum of the body's chemical reactions is known as:

- A) metabolism.
- B) phosphorylation.
- C) oxidation.
- D) homeostasis.

Answer: <https://biology-forums.com/index.php?topic=501758>

Question 678

Identify the biceps femoris muscle.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500236>

Question 679

Secondary ossification centers are characteristic of:

- A) mesenchymal ossification.
- B) intramembranous ossification.
- C) appositional growth.
- D) endochondral ossification.

Answer: <https://biology-forums.com/index.php?topic=498775>

Question 680

Explain how water interacts with hydrophobic and hydrophilic substances. Which type of substance is more likely to be dissolved by water?

Answer: <https://biology-forums.com/index.php?topic=498361>

Question 681

Broca's area is responsible for the ability to produce speech while Wernicke's area is responsible for the ability to understand language.

Answer: <https://biology-forums.com/index.php?topic=500581>

Question 682

Most fat in our adipose tissue is in the form of:

- A) phospholipids.
- B) cholesterol.
- C) triglycerides.
- D) steroids.

Answer: <https://biology-forums.com/index.php?topic=498340>

Question 683

List and describe the components of a feedback loop.

Answer: <https://biology-forums.com/index.php?topic=498250>

Question 684

What pH value represents a solution that releases 10 times more hydrogen ions than a pH of 7?

- A) pH 4
- B) pH 5
- C) pH 6
- D) pH 8

Answer: <https://biology-forums.com/index.php?topic=498322>

Question 685

Anencephaly, a fatal condition, results from the failure of the anterior end of the neural tube to close properly, causing failure of the forebrain to develop. Determine and discuss the germ layer involved in this defect.

Answer: <https://biology-forums.com/index.php?topic=511414>

Question 686

Which muscles forms the anterior surface of the neck?

- A) buccinator
- B) platysma
- C) trapezius
- D) orbicularis oris

Answer: <https://biology-forums.com/index.php?topic=500203>

Question 687

Before the mRNA transcribed from a gene can be used for translation into a protein, it must be:

- A) folded into its proper three-dimensional configuration.
- B) modified to remove exons, introns spliced together, and transported to a tRNA molecule.
- C) modified to remove introns, exons spliced together, and transported into the cytosol.
- D) coated with phospholipids for transport out of the nucleus.

Answer: <https://biology-forums.com/index.php?topic=498449>

Question 688

Ms. Trejo uses a bronchodilator, a medication that helps her breathe easier during an asthma attack. Explain the impact this medication will have on pulmonary ventilation.

Answer: <https://biology-forums.com/index.php?topic=501639>

Question 689

What description best matches the function of stereocilia?

- A) move up and down when the stapes moves back and forth
- B) transmit movement of the tympanic membrane to the inner ear
- C) bending produces depolarization or hyperpolarization in hair cells
- D) tiny calcium carbonate crystal that increase density in endolymph

Answer: <https://biology-forums.com/index.php?topic=500897>

Question 690

The most common type of neuron in the human body is:

- A) unipolar.
- B) pseudounipolar.
- C) multipolar.
- D) bipolar.

Answer: <https://biology-forums.com/index.php?topic=500404>

Question 691

What hormone suppresses the appetite?

- A) orexin
- B) leptin
- C) ghrelin
- D) neuropeptide Y

Answer: <https://biology-forums.com/index.php?topic=501814>

Question 692

The main two types of cartilage associated with the skeleton are fibrocartilage and hyaline cartilage.

Answer: <https://biology-forums.com/index.php?topic=498923>

Question 693

Under what conditions would antidiuretic hormone (ADH) be present to promote facultative water reabsorption? Specify where in the renal tubule this hormone exerts its effects.

Answer: <https://biology-forums.com/index.php?topic=501988>

Question 694

While walking through the parking lot to her car, Tara stepped in chewing gum. She medially rotated her foot toward the midline of the body to see the gum, performing:

- A) protraction.

- B) inversion.
- C) eversion.
- D) opposition.

Answer: <https://biology-forums.com/index.php?topic=499002>

Question 695

Determine the number of protons in an isotope of nitrogen with an atomic number of 7 and a mass number of 14.

- A) 7
- B) 10
- C) 14
- D) 17

Answer: <https://biology-forums.com/index.php?topic=498282>

Question 696

Which blood vessels handle the highest blood pressure?

- A) pulmonary veins
- B) systemic arteries
- C) systemic veins
- D) pulmonary arteries

Answer: <https://biology-forums.com/index.php?topic=501209>

Question 697

The intrinsic pathway to coagulation starts with tissue factor while the extrinsic factor starts with factor XII.

Answer: <https://biology-forums.com/index.php?topic=501370>

Question 698

What best describes cartilaginous joints?

- A) free range of motion
- B) joint cavity
- C) little, if any, motion
- D) presence of synovial fluid in the joint cavity

Answer: <https://biology-forums.com/index.php?topic=498975>

Question 699

What is the most metabolically active part of a neuron?

- A) axon hillock
- B) cell body
- C) dendrites
- D) axon

Answer: <https://biology-forums.com/index.php?topic=500401>

Question 700

Summarize the function of vascular anastomoses.

Answer: <https://biology-forums.com/index.php?topic=501277>

Question 701

Within the PNS, a neuron will regenerate only if:

- A) the surrounding neuroglia regenerate first.
- B) the neuron was myelinated.
- C) scar tissue is removed by phagocytosis.
- D) the cell body remains intact.

Answer: <https://biology-forums.com/index.php?topic=500413>

Question 702

Substances used to measure renal clearance should be:

- A) filtered, reabsorbed, and secreted.
- B) filtered but neither reabsorbed nor secreted.
- C) secreted but neither filtered nor reabsorbed.
- D) filtered and reabsorbed, but not secreted.

Answer: <https://biology-forums.com/index.php?topic=501944>

Question 703

Explain why a severe heart attack (myocardial infarction) has left Mr. Rodriguez's heart muscle weakened.

Answer: <https://biology-forums.com/index.php?topic=498627>

Question 704

When a person has an autoimmune disorder, antibodies are secreted that bind to:

- A) immunoglobulins.
- B) other antibodies.
- C) self antigens.
- D) allergens.

Answer: <https://biology-forums.com/index.php?topic=501487>

Question 705

What first tier hormone stimulates cortisol production?

- A) somatostatin
- B) corticotropic-releasing hormone (CRH)
- C) thyrotropic-releasing hormone (TRH)
- D) growth hormone-releasing hormone (GHRH)

Answer: <https://biology-forums.com/index.php?topic=500998>

Question 706

Cells in the epidermis of the skin need to be held tightly together so that an impermeable barrier to fluids is created. What type of junction performs this function?

- A) desmosome
- B) gap junction
- C) tight junction
- D) intercalated disc

Answer: <https://biology-forums.com/index.php?topic=498555>

Question 707

An inability to swallow indicates a problem with the:

- A) accessory nerve (XI) or hypoglossal nerve (XII).
- B) olfactory nerve (I).
- C) trochlear nerve (IV) or abducens nerve (VI).
- D) trigeminal nerve (V) or glossopharyngeal nerve (IX).

Answer: <https://biology-forums.com/index.php?topic=500637>

Question 708

Outline the events of intramembranous ossification.

Answer: <https://biology-forums.com/index.php?topic=498823>

Question 709

Discuss the type of glial cell that becomes activated within a brain region affected by stroke.

Answer: <https://biology-forums.com/index.php?topic=500479>

Question 710

When a second EPSP arrives at a single synapse before the effects of the first have disappeared, what results?

- A) spatial summation
- B) temporal summation
- C) hyperpolarization
- D) inhibition of the impulse

Answer: <https://biology-forums.com/index.php?topic=500450>

Question 711

What is a function of the anterior cruciate ligament (ACL) of the knee joint?

- A) The ACL prevents the tibia from moving too far medially on the femur.
- B) The ACL prevents the tibia from moving too far laterally on the femur.

- C) The ACL prevents the tibia from displacing itself posteriorly from the femur.
D) The ACL prevents the tibia from moving too far anteriorly on the femur.

Answer: <https://biology-forums.com/index.php?topic=499021>

Question 712

When you go outside on a hot summer day, your body temperature heats up above the normal range. Receptors in your brain detect the change in body temperature. The brain activates nerve cells that send messages to sweat glands, causing the body temperature to fall as the sweat evaporates from the skin. What part of this feedback loop is the stimulus?

- A) increased body temperature
B) brain
C) nerve cells
D) sweat glands

Answer: <https://biology-forums.com/index.php?topic=498207>

Question 713

Describe the pathway of the action potential through the cardiac conduction system.

Answer: <https://biology-forums.com/index.php?topic=501177>

Question 714

Explain the influence of arterial blood pressure on tissue perfusion.

Answer: <https://biology-forums.com/index.php?topic=501287>

Question 715

Explain why a patient with diabetes mellitus may receive news of glycosuria after a urinalysis test in his doctor's office.

Answer: <https://biology-forums.com/index.php?topic=501987>

Question 716

Feeding centers are located in the:

- A) corpus callosum.
B) hypothalamus.
C) thalamus.
D) pons.

Answer: <https://biology-forums.com/index.php?topic=501815>

Question 717

The function of red blood cells is to:

- A) stop blood loss from an injured blood vessel.
B) transport oxygen and carbon dioxide.
C) transport nutrients to the body's cells and tissues.
D) phagocytize bacteria.

Answer: <https://biology-forums.com/index.php?topic=501314>

Question 718

A medication called an angiotensin-converting enzyme (ACE) inhibitor can be used to treat hypertension as it prevents the formation of angiotensin-II. Determine why this medication would be an effective treatment for high blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501297>

Question 719

Which of the following is the correct sequence, from simplest to most complex, in the levels of structural organization of the human body?

- A) chemical level, cellular level, tissue level, organ level, organ system level, organismal level
B) chemical level, tissue level, cellular level, organ system level, organ level, organismal level
C) cellular level, chemical level, tissue level, organ level, organ system level, organismal level
D) cellular level, tissue level, chemical level, organ level, organ system level, organismal level

Answer: <https://biology-forums.com/index.php?topic=498170>

Question 720

You reached into the freezer to grab a piece of ice. Temperature information is carried to the brain by the posterior columns of white matter in the spinal cord.

Answer: <https://biology-forums.com/index.php?topic=500589>

Question 721

Explain how the secretions of eccrine sweat glands differ from those of the apocrine sweat glands.

Answer: <https://biology-forums.com/index.php?topic=498731>

Question 722

The removal of the gallbladder will affect:

- A) bile storage.
- B) bile production.
- C) carbohydrate digestion.
- D) motility of the stomach.

Answer: <https://biology-forums.com/index.php?topic=501706>

Question 723

Describe the function of the lacrimal gland.

Answer: <https://biology-forums.com/index.php?topic=500921>

Question 724

If a couple want to have sexual intercourse, and they do not wish to use a behavior method as a form of birth control since they know it comes with high risk. What could be an alternative method?

- A) abstinence
- B) condoms
- C) rhythm method
- D) withdrawal

Answer: <https://biology-forums.com/index.php?topic=511243>

Question 725

What is the building block of a lipid?

- A) glucose
- B) fatty acid
- C) glycogen
- D) nucleic acid

Answer: <https://biology-forums.com/index.php?topic=498336>

Question 726

Which nervous system usually maintains a heart rate of 72 beats per minute?

- A) sympathetic nervous system
- B) parasympathetic nervous system
- C) somatic nervous system
- D) central nervous system

Answer: <https://biology-forums.com/index.php?topic=500790>

Question 727

Where are creatinine, ammonium ions, small amounts of urea, and drugs such as penicillin typically secreted?

- A) collecting duct
- B) proximal tubule
- C) distal tubule
- D) ascending limb of the nephron loop (loop of Henle)

Answer: <https://biology-forums.com/index.php?topic=501934>

Question 728

Which of the following accompanies puberty?

- A) female climacteric, or menopause
- B) male climacteric, or andropause
- C) menarche
- D) atresia

Answer: <https://biology-forums.com/index.php?topic=511241>

Question 729

What would a needle travel through as it enters the right lung?

- A) parietal pleura, serous fluid, visceral pleura, right lung
- B) parietal pleura, serous fluid, right lung, visceral pleura
- C) visceral pleura, serous fluid, parietal pleura, right lung
- D) visceral pericardium, serous fluid, parietal pericardium, right lung

Answer: <https://biology-forums.com/index.php?topic=498202>

Question 730

B cells develop and mature in the:

- A) thymus.
- B) liver.
- C) lymph nodes.
- D) bone marrow.

Answer: <https://biology-forums.com/index.php?topic=501445>

Question 731

Calculate the cardiac output if the heart rate is 100 beats per minute and the stroke volume is 65 ml.

- A) 0.65 ml/min
- B) 65 ml/min
- C) 650 ml/min
- D) 6500 ml/min

Answer: <https://biology-forums.com/index.php?topic=501144>

Question 732

Which cell develops into mature neutrophils?

- A) monoblast
- B) monocyte
- C) band (stab) cell
- D) lymphoblast

Answer: <https://biology-forums.com/index.php?topic=501336>

Question 733

Trace the pathway of feces through the portions of the large intestine from the ileocecal valve to the anal canal.

Answer: <https://biology-forums.com/index.php?topic=501746>

Question 734

Auditory stimuli are sent first to the midbrain where some processing occurs. The remainder of stimuli are routed to the thalamus and then on to the primary auditory cortex in the superior occipital lobe.

Answer: <https://biology-forums.com/index.php?topic=500592>

Question 735

Tears produced by the lacrimal glands sweep from the superolateral region of the orbit toward the medial and inferior portions of the eye. The tears drain into the passages leading to the nasal cavity.

Answer: <https://biology-forums.com/index.php?topic=500905>

Question 736

On which body surface is the sural region?

- A) anterior (ventral)
- B) posterior (dorsal)
- C) superficial
- D) medial

Answer: <https://biology-forums.com/index.php?topic=498187>

Question 737

How much water does the average person lose per day?

- A) 5 liters
- B) 1 liter
- C) 1.5 liters
- D) 2.5 liters

Answer: <https://biology-forums.com/index.php?topic=502008>

Question 738

What initiates T cell activation?

- A) T cell activation begins when a T cell is ingested by a macrophage.
- B) T cell activation begins with a cell processing and displaying antigen fragments on its MHC molecules.
- C) T cell activation begins with the interaction of the T cell with other molecules on the cells called co-stimulators.
- D) T cell activation begins when the T cell differentiates into effector cells and memory cells.

Answer: <https://biology-forums.com/index.php?topic=501436>

Question 739

Which of the following are organs of the central nervous system?

- A) brain and spinal cord
- B) spinal cord and spinal nerves
- C) brain and cranial nerves
- D) brain, cranial nerves, spinal cord, and spinal nerves

Answer: <https://biology-forums.com/index.php?topic=500391>

Question 740

Approximately how many days after fertilization is a fetus considered full-term and ready to be born?

- A) 185 days
- B) 238 days
- C) 266 days
- D) 324 days

Answer: <https://biology-forums.com/index.php?topic=511340>

Question 741

The reabsorption of bicarbonate ions in the proximal tubule helps regulate:

- A) blood pressure.
- B) blood pH.
- C) blood solute concentration of sodium ions.
- D) blood volume.

Answer: <https://biology-forums.com/index.php?topic=501931>

Question 742

Explain the difference between accommodation and convergence.

Answer: <https://biology-forums.com/index.php?topic=500926>

Question 743

The muscle named gluteus maximus tells us two facts: 1) it is located in the buttocks (gluteus), and 2) it is a large muscle (maximus).

Answer: <https://biology-forums.com/index.php?topic=500251>

Question 744

While driving home, Henry watched as a large truck drifted into his lane from oncoming traffic. Henry's central nervous system integrated this information to determine the position of his own vehicle, and then he made a decision to swerve his vehicle closer to the side of the road to avoid a head-on collision. From this scenario, determine the sensory information and his motor functions.

Answer: <https://biology-forums.com/index.php?topic=500493>

Question 745

The cardiac conduction system is normally regulated by a population of pacemaker cells known as the sinoatrial (SA) node.

Answer: <https://biology-forums.com/index.php?topic=501160>

Question 746

Predict the effect on the length of the R-R interval of an electrocardiogram (ECG) if a patient experiences bradycardia.

Answer: <https://biology-forums.com/index.php?topic=501189>

Question 747

The stage of the cell cycle in which the cell performs its normal functions and prepares for cell division is called:

- A) anaphase.
- B) interphase.
- C) metaphase.
- D) telophase.

Answer: <https://biology-forums.com/index.php?topic=498456>

Question 748

A high level of pyrogens most affects the:

- A) thalamus.
- B) hypothalamus.
- C) pons.
- D) medulla oblongata.

Answer: <https://biology-forums.com/index.php?topic=501431>

Question 749

List the three segments, or divisions, of the small intestine in order, from the proximal to the distal end.

Answer: <https://biology-forums.com/index.php?topic=501743>

Question 750

List the three distinct zones of the adrenal cortex, from superficial to deep, and identify the group of steroid hormones produced by each.

Answer: <https://biology-forums.com/index.php?topic=501051>

Question 751

The juxtamedullary apparatus acts as a special vascular system called the countercurrent exchanger.

Answer: <https://biology-forums.com/index.php?topic=501982>

Question 752

What cells decline in number during the final phase of HIV-1 infection, when an individual is said to have AIDS?

- A) memory B cells
- B) B cells
- C) plasma cells
- D) helper T (TH) cells

Answer: <https://biology-forums.com/index.php?topic=501486>

Question 753

Fatty acids and amino acids produce far less ATP than one glucose molecule.

Answer: <https://biology-forums.com/index.php?topic=501847>

Question 754

Explain the roles of messenger and transfer RNA in protein synthesis.

Answer: <https://biology-forums.com/index.php?topic=498482>

Question 755

Explain how contractile cells and pacemaker cells differ in cardiac muscle tissue.

Answer: <https://biology-forums.com/index.php?topic=501174>

Question 756

Where should a fertilized ovum implant?

- A) vagina
- B) infundibulum of the uterine tube
- C) uterus
- D) ampulla of the uterine tube

Answer: <https://biology-forums.com/index.php?topic=511220>

Question 757

Carolina learned she had a salivary stone blocking the submandibular duct connecting her submandibular gland to the oral cavity. Determine the impact of this blockage on saliva production and chemical digestion in the mouth.

Answer: <https://biology-forums.com/index.php?topic=501737>

Question 758

A callus may develop when both thin and thick skin are subjected to repeated pressure. Which layer of the epidermis develops the callus?

- A) stratum spinosum
- B) stratum corneum
- C) stratum basale
- D) stratum lucidum

Answer: <https://biology-forums.com/index.php?topic=498675>

Question 759

A female patient presents at the emergency room with pain in the right lower quadrant. Which organs might be involved?

Answer: <https://biology-forums.com/index.php?topic=498246>

Question 760

How does hypertrophy change a muscle? Briefly explain.

Answer: <https://biology-forums.com/index.php?topic=500361>

Question 761

Where is the sensation of touch processed?

- A) prefrontal cortex
- B) primary somatosensory cortex, or S1
- C) somatosensory association cortex, or S2
- D) primary motor cortex

Answer: <https://biology-forums.com/index.php?topic=500555>

Question 762

An epidural, or spinal anesthesia, is administered into the CSF flow around the spinal cord. Into what space is this medication injected?

- A) dural sinus
- B) epidural space
- C) subarachnoid space
- D) subdural space

Answer: <https://biology-forums.com/index.php?topic=500548>

Question 763

What percentage of the total Caloric intake should be saturated fats?

- A) 0%
- B) no greater than 10%
- C) no greater than 30%
- D) 45-60%

Answer: <https://biology-forums.com/index.php?topic=501831>

Question 764

Explain why potassium ion imbalances are less affected by water imbalances than sodium ions.

Answer: <https://biology-forums.com/index.php?topic=511171>

Question 765

What best characterizes the function of the parasympathetic nervous system?

- A) The parasympathetic nervous system maintains homeostasis when the body is at rest.
- B) The parasympathetic nervous system prepares the body for emergency situations.
- C) The parasympathetic nervous system is the "fight or flight" system.
- D) The parasympathetic nervous system prepares the body for physical activity.

Answer: <https://biology-forums.com/index.php?topic=500770>

Question 766

Which immune response has a shorter lag phase in which more antibody levels peak more rapidly?

- A) inflammation response
- B) secondary immune response
- C) passive immunity
- D) primary immune response

Answer: <https://biology-forums.com/index.php?topic=501474>

Question 767

What vitamin is synthesized by the skin? Explain why this vitamin is critical for various physiological processes.

Answer: <https://biology-forums.com/index.php?topic=498722>

Question 768

Where does infraspinatus insert?

- A) greater tubercle of the humerus
- B) infraspinous fossa of the scapula
- C) acromion and spine of the scapula
- D) coracoid process of the scapula

Answer: <https://biology-forums.com/index.php?topic=500226>

Question 769

A football player sustained an injury to his hamstring group. What muscles belong to the hamstring group and what would be the effect of the injury on this group?

Answer: <https://biology-forums.com/index.php?topic=500278>

Question 770

Your wrap your hands around a warm cup of hot chocolate. This sensation is detected by a:

- A) hair follicle receptor.
- B) chemoreceptor.
- C) thermoreceptor.
- D) photoreceptor.

Answer: <https://biology-forums.com/index.php?topic=500659>

Question 771

A patient with heart failure is administered an intravenous line containing a solution of hypertonic sodium chloride. Select the patient for whom this solution an appropriate choice.

- A) The patient is experiencing overhydration, or hypotonic hydration.
- B) The patient is dehydrated.
- C) The patient is experiencing hypovolemia.
- D) The patient produces too little antidiuretic hormone (ADH).

Answer: <https://biology-forums.com/index.php?topic=502019>

Question 772

Dilation is the longest of the three stages of labor.

Answer: <https://biology-forums.com/index.php?topic=511391>

Question 773

Which of the following is NOT a function of synovial fluid?

- A) protect tendons
- B) shock absorption
- C) provide nutrients
- D) lubrication

Answer: <https://biology-forums.com/index.php?topic=498982>

Question 774

What type of blood cell transports oxygen throughout the body?

- A) leukocyte
- B) erythrocyte
- C) platelet
- D) osteoblast

Answer: <https://biology-forums.com/index.php?topic=498588>

Question 775

What controls the movement of rectus abdominis, a skeletal muscle on the anterior surface of the body?

- A) posterior ramus

- B) posterior (dorsal) root ganglion
- C) posterior root
- D) anterior ramus

Answer: <https://biology-forums.com/index.php?topic=500641>

Question 776

Due to the low heat capacity of water, the human body is resistant to overheating and cooling down quickly.

Answer: <https://biology-forums.com/index.php?topic=498376>

Question 777

Which of the following hormones decreases heart rate, and thus cardiac output and blood pressure?

- A) angiotensin-II
- B) acetylcholine
- C) epinephrine
- D) norepinephrine

Answer: <https://biology-forums.com/index.php?topic=501220>

Question 778

What organ serves as the control center for the regulation of erythropoiesis?

- A) liver
- B) kidney
- C) spleen
- D) pancreas

Answer: <https://biology-forums.com/index.php?topic=501321>

Question 779

The primary immune response:

- A) occurs after the first exposure to an antigen.
- B) has a shorter lag phase than the secondary immune response.
- C) primarily involves the antibody IgG.
- D) produces peak antibody levels rapidly (1-3 days).

Answer: <https://biology-forums.com/index.php?topic=501475>

Question 780

Acinar cells of the pancreas release:

- A) pancreatic juice.
- B) glucagon.
- C) cholecystokinin.
- D) insulin.

Answer: <https://biology-forums.com/index.php?topic=501699>

Question 781

Describe the three types of protein fibers common to the extracellular matrix of tissues.

Answer: <https://biology-forums.com/index.php?topic=498611>

Question 782

Terminal bronchioles, part of the conducting zone, give rise to respiratory bronchioles, which are part of the respiratory zone.

Answer: <https://biology-forums.com/index.php?topic=501628>

Question 783

Wrist bones are known as:

- A) tarsals.
- B) carpals.
- C) phalanges.
- D) metacarpals.

Answer: <https://biology-forums.com/index.php?topic=498901>

Question 784

Seventy-year-old Jerry should NOT expect regeneration of worn, damaged:

- A) bones.
- B) cartilage.
- C) fat.
- D) epithelium.

Answer: <https://biology-forums.com/index.php?topic=498584>

Question 785

What feature is NOT part of the synovial joint?

- A) synovial fluid
- B) articular cartilage
- C) articular capsule
- D) tendon sheath

Answer: <https://biology-forums.com/index.php?topic=498981>

Question 786

From superficial to deep, the three muscles of the lateral abdominal wall are:

- A) external oblique, internal oblique, transversus abdominis.
- B) transversus abdominis, external oblique, internal oblique.
- C) external oblique, internal oblique, rectus abdominis.
- D) rectus abdominis, external oblique, internal oblique.

Answer: <https://biology-forums.com/index.php?topic=500214>

Question 787

What is required for glucose catabolism to proceed beyond glycolysis?

- A) heat
- B) oxygen
- C) water
- D) carbon dioxide

Answer: <https://biology-forums.com/index.php?topic=501787>

Question 788

What is the function of a buffer?

- A) Buffers lower the activation energy of a chemical reaction.
- B) Buffers act as a lubricant between two adjacent surfaces.
- C) Buffers absorb heat without changing temperature themselves.
- D) Buffers prevent large swings in pH when an acid or base is added to a solution.

Answer: <https://biology-forums.com/index.php?topic=498325>

Question 789

Nuclear pores connect the cytoplasm with the nucleoplasm and allow substances to move between the two areas.

Answer: <https://biology-forums.com/index.php?topic=498494>

Question 790

Which of the following is correct about threshold?

- A) Voltage-gated potassium channels inactivate.
- B) Voltage-gated potassium channels begin to close.
- C) The membrane begins to hyperpolarize.
- D) Threshold is more positive than the resting potential.

Answer: <https://biology-forums.com/index.php?topic=500426>

Question 791

The quadriceps femoris group includes all of the following EXCEPT:

- A) vastus medialis.
- B) vastus lateralis.
- C) biceps femoris.
- D) vastus intermedius.

Answer: <https://biology-forums.com/index.php?topic=500240>

Question 792

List the two main functions of the ovaries.

Answer: <https://biology-forums.com/index.php?topic=511275>

Question 793

What is a dipole?

- A) polar molecule
- B) a salt
- C) a type of reaction
- D) nonpolar molecule

Answer: <https://biology-forums.com/index.php?topic=498297>

Question 794

What vessel(s) deliver oxygenated blood to the left atrium?

- A) pulmonary veins
- B) pulmonary trunk
- C) pulmonary arteries
- D) aorta

Answer: <https://biology-forums.com/index.php?topic=501102>

Question 795

Javier stepped on a splinter while walking barefoot. The splinter pierced deep into his foot and caused him a great amount of pain. Describe the pathway of pain sensation from the appropriate tract in the spinal cord into the brain where perception occurs.

Answer: <https://biology-forums.com/index.php?topic=500606>

Question 796

What is the octet rule?

Answer: <https://biology-forums.com/index.php?topic=498354>

Question 797

Where does the motor portion of the facial nerve (VIII) originate?

- A) midbrain
- B) nuclei in the pons and medulla
- C) tongue
- D) cerebral cortex

Answer: <https://biology-forums.com/index.php?topic=500640>

Question 798

What happens to epithelial tissue damaged from a superficial paper cut?

- A) Epithelial tissue heals by regeneration.
- B) Epithelial tissue is replaced by dense irregular connective tissue.
- C) Epithelial tissue heals by fibrosis.
- D) Epithelial tissue is replaced by scar tissue.

Answer: <https://biology-forums.com/index.php?topic=498607>

Question 799

What best exemplifies enzymatic hydrolysis?

- A) mastication
- B) segmentation
- C) nutrient breakdown
- D) absorption

Answer: <https://biology-forums.com/index.php?topic=501710>

Question 800

The vagus nerve is represented by Roman numeral:

- A) I.
- B) X.
- C) V.
- D) XII.

Answer: <https://biology-forums.com/index.php?topic=500632>

Question 801

What secretion do we intend to inhibit with the application of antiperspirants to the axillae (armpits)? Why apply a deodorant to the axillae?
Answer: <https://biology-forums.com/index.php?topic=498732>

Question 802

What region of the stomach does food first enter after its passage through the relaxed gastroesophageal sphincter?

- A) body
- B) fundus
- C) cardia
- D) pylorus

Answer: <https://biology-forums.com/index.php?topic=501666>

Question 803

The soleus is a synergist of the gastrocnemius during plantar flexion.

Answer: <https://biology-forums.com/index.php?topic=500261>

Question 804

List the two classes of sympathetic receptors and the neurotransmitter(s) each binds.

Answer: <https://biology-forums.com/index.php?topic=500810>

Question 805

Calculate the mean arterial pressure (MAP) given a diastolic pressure of 60 mm Hg and a systolic pressure of 100 mm Hg.

Answer: <https://biology-forums.com/index.php?topic=501281>

Question 806

A cell is placed into a 3% dextrose solution. At that concentration, the solution is isotonic to the cell. If the concentration of dextrose in the solution is increased to 5%, the cell is now in a(n):

- A) hypotonic solution.
- B) less concentrated solution.
- C) hypertonic solution.
- D) isotonic solution.

Answer: <https://biology-forums.com/index.php?topic=498410>

Question 807

All leukocytes arise from:

- A) myeloid stem cells.
- B) hematopoietic stem cells (HSCs).
- C) lymphoid stem cells.
- D) leukoblasts.

Answer: <https://biology-forums.com/index.php?topic=501335>

Question 808

Lauren has type I diabetes mellitus (insulin-dependent diabetes mellitus). She has heard that her pancreas does not work at all. Did she receive correct information about her pancreas? Explain.

Answer: <https://biology-forums.com/index.php?topic=501059>

Question 809

A man eating in a restaurant chokes on a piece of food. He grabs his neck, unable to speak. Why is it significant that the man cannot talk and where has the food lodged?

Answer: <https://biology-forums.com/index.php?topic=501636>

Question 810

What part of the following description is INCORRECT? Contraction of the diaphragm and external intercostal muscles leads to increased volume in the thoracic cavity and the lungs. The increase in volume leads to an increase in intrapulmonary pressure causing air to move into the lungs.

- A) Increases in volume lead to a decrease in pressure, not an increase in pressure.
- B) The contraction of the diaphragm and external intercostal muscles leads to a decrease in volume, not an increase in volume.
- C) Increased volume and decreased pressure cause air to leave the lungs, rather than enter the lungs.

D) The relaxation, not contraction, of the diaphragm and external intercostal muscles leads to inhalation.

Answer: <https://biology-forums.com/index.php?topic=501563>

Question 811

What fiber is commonly associated with fibrous joints?

- A) elastic
- B) collagen
- C) reticular
- D) keratin

Answer: <https://biology-forums.com/index.php?topic=498970>

Question 812

What hormones are released from the adrenal medulla?

- A) corticosteroids
- B) catecholamines
- C) androgenic steroids
- D) glucocorticoids

Answer: <https://biology-forums.com/index.php?topic=500989>

Question 813

The osmotic pressure gradient, or the force of solutes in a solution, tends to push water away from the solution with the higher osmotic pressure, or the more concentrated solution, by osmosis.

Answer: <https://biology-forums.com/index.php?topic=511149>

Question 814

Briefly explain the function of fontanelles and unfused sutures in a fetal skull.

Answer: <https://biology-forums.com/index.php?topic=498942>

Question 815

What are the three main regions of the kidney?

- A) renal pelvis, renal medulla, renal cortex
- B) renal sinus, renal pelvis, renal cortex
- C) renal sinus, renal medulla, renal cortex
- D) renal pelvis, renal sinus, renal fascia

Answer: <https://biology-forums.com/index.php?topic=501885>

Question 816

Outline the general pathway for the formation, circulation, and reabsorption of cerebrospinal fluid (CSF).

Answer: <https://biology-forums.com/index.php?topic=500601>

Question 817

The rapid influx of sodium ions into contractile cells creates a positive membrane potential inside the cell and initiates the:

- A) plateau phase.
- B) repolarization phase.
- C) rapid depolarization phase.
- D) initial repolarization phase.

Answer: <https://biology-forums.com/index.php?topic=501107>

Question 818

What is the primary effect of antidiuretic hormone (ADH, or vasopressin)?

- A) sodium retention by the kidneys
- B) water retention by the kidneys
- C) increases urine production by the kidneys
- D) blood glucose regulation

Answer: <https://biology-forums.com/index.php?topic=500963>

Question 819

The normal hydrogen ion concentration of body fluids is equal to a pH range of about 7.35—7.45.

Answer: <https://biology-forums.com/index.php?topic=511156>

Question 820

John experienced a cut that severs the tendon that attaches the insertion of the gastrocnemius muscle. As a result of this injury, what action is difficult for him to perform?

- A) inversion of the foot
- B) plantar flexion
- C) dorsiflexion
- D) eversion of the foot

Answer: <https://biology-forums.com/index.php?topic=500245>

Question 821

Explain fluid movement when the net filtration pressure (NFP) is a negative value.

Answer: <https://biology-forums.com/index.php?topic=501289>

Question 822

Jesse felt comfortable using the microscope after listening to directions from his lab professor. His learning style preference must be:

- A) visual/verbal learner.
- B) tactile/kinesthetic learner.
- C) visual/nonverbal learner.
- D) auditory/verbal learner.

Answer: <https://biology-forums.com/index.php?topic=498160>

Question 823

Which letter represents the head of the metatarsal bone in this figure?

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=498920>

Question 824

Explain why myoglobin is useful.

Answer: <https://biology-forums.com/index.php?topic=500356>

Question 825

List the seven tarsal bones of the foot.

Answer: <https://biology-forums.com/index.php?topic=498952>

Question 826

Adaptive, or specific, immunity consists of antimicrobial proteins and certain cells that respond quickly to pathogens within the first 12 hours after exposure.

Answer: <https://biology-forums.com/index.php?topic=501491>

Question 827

List the three general causes of respiratory acidosis.

Answer: <https://biology-forums.com/index.php?topic=511174>

Question 828

The reactions of oxidative catabolism, or aerobic respiration, can occur in the mitochondrion only in the presence of:

- A) hydrogen ions.
- B) carbon dioxide.
- C) alkaline pH.
- D) oxygen.

Answer: <https://biology-forums.com/index.php?topic=498424>

Question 829

A bruise appears greenish in the skin because:

- A) green-colored hemoglobin leaks from the bloodstream into the bruise.

- B) the heme group in hemoglobin has broken down into biliverdin.
C) bilirubin from hemoglobin recycling has accumulated in the bruise.
D) dead white blood cells accumulate at the site of injury.

Answer: <https://biology-forums.com/index.php?topic=501326>

Question 830

Which of the following is NOT a bacterial sexually transmitted infection (STI)?

- A) genital herpes
B) syphilis
C) chlamydia
D) gonorrhea

Answer: <https://biology-forums.com/index.php?topic=511246>

Question 831

Blood transfusions between incompatible blood types results in:

- A) type I, or immediate, hypersensitivity.
B) type II, or antibody-mediated, hypersensitivity.
C) type III, or immune-complex mediated, hypersensitivity.
D) type IV, or delayed-type, hypersensitivity.

Answer: <https://biology-forums.com/index.php?topic=501484>

Question 832

A first-class lever has the fulcrum situated farther from the point of the applied force, with the load to be moved in between.

Answer: <https://biology-forums.com/index.php?topic=500254>

Question 833

Afterload is described as:

- A) the ability to generate tension.
B) the force the ventricles must overcome to eject blood into their respective arteries.
C) the length or degree of stretch of the sarcomeres in the ventricular cells before they contract.
D) the amount of blood that has drained into the ventricle by the end of the filling phase.

Answer: <https://biology-forums.com/index.php?topic=501151>

Question 834

Calculate cardiac output if the heart rate is 85 beats/minute, end-diastolic volume (EDV) is 130 ml, and end-systolic volume (ESV) is 60 ml.

- A) 5950 ml/min
B) 5100 ml/min
C) 7800 ml/min
D) 16,140 ml/min

Answer: <https://biology-forums.com/index.php?topic=501143>

Question 835

The general type of tissue with an apical surface and a basement membrane is:

- A) connective.
B) epithelial.
C) muscle.
D) nervous.

Answer: <https://biology-forums.com/index.php?topic=498557>

Question 836

What information is received by the primary vestibular cortex?

- A) vision
B) hearing
C) equilibrium
D) taste

Answer: <https://biology-forums.com/index.php?topic=500514>

Question 837

Graded potentials:

- A) produce an effect that increases with distance from the point of stimulation.
- B) produce an effect that spreads actively across the membrane surface.
- C) may cause either a depolarization or a hyperpolarization.
- D) cause repolarization.

Answer: <https://biology-forums.com/index.php?topic=500421>

Question 838

Baroreceptors that detect changes in blood pressure are located in the superior and inferior vena cava.

Answer: <https://biology-forums.com/index.php?topic=501268>

Question 839

What is the most common cause for hypernatremia?

- A) dehydration
- B) edema
- C) water toxicity
- D) hypotonic hydration

Answer: <https://biology-forums.com/index.php?topic=502023>

Question 840

What part of the brain largely controls homeostatic functions?

- A) pineal gland
- B) hypothalamus
- C) cerebellum
- D) occipital lobe

Answer: <https://biology-forums.com/index.php?topic=500791>

Question 841

Which of the following is NOT a treatment for hypertension?

- A) stop smoking
- B) increase physical activity
- C) increase intake of sugar
- D) limit alcohol intake

Answer: <https://biology-forums.com/index.php?topic=501228>

Question 842

Which of the following is the most important excitatory neurotransmitter in the CNS?

- A) dopamine
- B) glutamate
- C) glycine
- D) GABA

Answer: <https://biology-forums.com/index.php?topic=500456>

Question 843

Which portion of the uterus is shed during menstruation?

- A) myometrium
- B) stratum basalis of the endometrium
- C) perimetrium
- D) stratum functionalis of the endometrium

Answer: <https://biology-forums.com/index.php?topic=511239>

Question 844

Which organ generates a population of T cells capable of protecting the body from pathogens?

- A) thymus
- B) spleen
- C) tonsils
- D) lymph nodes

Answer: <https://biology-forums.com/index.php?topic=501412>

Question 845

Describe the coronary circulation.

Answer: <https://biology-forums.com/index.php?topic=501170>

Question 846

Although Christopher had spinal cord damage, his autonomic nervous system (ANS) was still able to maintain some control over his viscera in the thoracic and abdominopelvic cavities. Which ANS division could still maintain some control? Explain.

Answer: <https://biology-forums.com/index.php?topic=500821>

Question 847

How is most oxygen transported in the blood?

- A) as the bicarbonate ion in the plasma
- B) bound to hemoglobin as oxyhemoglobin
- C) combined with hemoglobin as carbaminohemoglobin
- D) as carbonic acid in the plasma

Answer: <https://biology-forums.com/index.php?topic=501584>

Question 848

Mrs. Floyd developed an accentuated lumbar curvature during the last few months of her pregnancy. Determine this spinal curvature.

- A) scoliosis
- B) kyphosis
- C) lordosis
- D) spina bifida

Answer: <https://biology-forums.com/index.php?topic=511347>

Question 849

What effect does high blood pressure have on the glomerular filtration rate (GFR) in the absence of regulatory mechanisms?

- A) GFR will increase.
- B) GFR will decrease.
- C) GFR will not change.
- D) GFR will decrease, then increase.

Answer: <https://biology-forums.com/index.php?topic=501917>

Question 850

Which vessels are the most compliant?

- A) systemic veins
- B) systemic arteries
- C) systemic arterioles
- D) systemic metarterioles

Answer: <https://biology-forums.com/index.php?topic=501207>

Question 851

Secondary sex characteristics of females are stimulated by:

- A) aldosterone.
- B) androgens.
- C) testosterone.
- D) estrogens.

Answer: <https://biology-forums.com/index.php?topic=501021>

Question 852

Which of the following is NOT a population of pacemaker cells in the heart?

- A) sinoatrial (SA) node
- B) papillary muscles
- C) atrioventricular (AV) node
- D) Purkinje fiber system

Answer: <https://biology-forums.com/index.php?topic=501114>

Question 853

Describe the structure of a nerve plexus and explain the advantage of this structure to its function.

Answer: <https://biology-forums.com/index.php?topic=500713>

Question 854

Trace the pathway of blood flow through the heart. Begin and end the pathway with the systemic capillaries.

Answer: <https://biology-forums.com/index.php?topic=501186>

Question 855

If a resting axon increases its permeability to sodium ions:

- A) the membrane potential will repolarize.
- B) the membrane potential will hyperpolarize.
- C) the influx of sodium ions will increase and the membrane will depolarize.
- D) the outward movement of sodium ions will decrease.

Answer: <https://biology-forums.com/index.php?topic=500418>

Question 856

Discuss the specific nerves involved in the parasympathetic nervous system.

Answer: <https://biology-forums.com/index.php?topic=500814>

Question 857

Describe how third-class levers operate in terms of force moved and speed of movement.

Answer: <https://biology-forums.com/index.php?topic=500266>

Question 858

Which hormone influences the concentration of hydrogen ions in the filtrate formed by the kidneys?

- A) parathyroid hormone
- B) vitamin D3 (calcitonin)
- C) aldosterone
- D) atrial natriuretic peptide (ANP)

Answer: <https://biology-forums.com/index.php?topic=511131>

Question 859

What creates the boundary between the air-filled middle ear and the fluid-filled inner ear?

- A) oval window
- B) basilar membrane
- C) tympanic membrane
- D) tectorial membrane

Answer: <https://biology-forums.com/index.php?topic=500876>

Question 860

Explain how the processes of gastrulation and organogenesis are related.

Answer: <https://biology-forums.com/index.php?topic=511402>

Question 861

Dan injured the spinal nerves emerging from the lower lumbar and sacral region of the spinal cord during a horse-riding accident. After his injury, he reported numbness in his feet. Explain the connection between the loss of sensation he has described and the plexus responsible for serving this area.

Answer: <https://biology-forums.com/index.php?topic=500726>

Question 862

Muscle cells require an abundant amount of ATP to function. Therefore, muscle cells have numerous:

- A) ribosomes.
- B) lysosomes.
- C) peroxisomes.
- D) mitochondria.

Answer: <https://biology-forums.com/index.php?topic=498423>

Question 863

An elevated ridge on the surface of the cerebrum is known as a:

- A) gyrus.

- B) fissure.
- C) sulcus.
- D) furrow.

Answer: <https://biology-forums.com/index.php?topic=500507>

Question 864

Which of the following is a functional joint classification?

- A) fibrous
- B) cartilaginous
- C) diarthrosis
- D) synovial

Answer: <https://biology-forums.com/index.php?topic=498959>

Question 865

The thumb is the _____ while the great toe is the _____.

- A) carpal; tarsal
- B) pollex; hallux
- C) scaphoid; cuboid
- D) hallux; talus

Answer: <https://biology-forums.com/index.php?topic=498919>

Question 866

From deep (innermost) to superficial (outermost), the layers of the organs of the alimentary canal are:

1. mucosa
 2. muscularis externa
 3. serosa (adventitia)
 4. submucosa
- A) 1, 4, 2, 3
 - B) 3, 2, 4, 1
 - C) 1, 2, 4, 3
 - D) 1, 4, 3, 2

Answer: <https://biology-forums.com/index.php?topic=501648>

Question 867

Visceral pain may be perceived as cutaneous pain, a phenomenon known as:

- A) phantom limb pain.
- B) slowly adapting reception.
- C) referred pain.
- D) the receptive field.

Answer: <https://biology-forums.com/index.php?topic=500669>

Question 868

Yuri is working with a chemical in lab. This chemical is composed of repetitive units that include a phosphate group, a nitrogenous base, and a sugar known as ribose. He is working with:

- A) a nucleic acid.
- B) a carbohydrate.
- C) a lipid.
- D) a protein.

Answer: <https://biology-forums.com/index.php?topic=498346>

Question 869

Explain the role of oxytocin in lactation.

Answer: <https://biology-forums.com/index.php?topic=511410>

Question 870

Explain the role of the hypothalamus in body temperature regulation.

Answer: <https://biology-forums.com/index.php?topic=500610>

Question 871

True membranes must fit these structural and functional qualifications: consist of a superficial layer of epithelial tissue and a layer of connective tissue on which it rests; and, anchor organs in place, serve as barriers, function in immunity and secrete various substances.

Answer: <https://biology-forums.com/index.php?topic=498639>

Question 872

What is a gradient?

- A) equilibrium or balance between two unconnected areas
- B) more of something exists in one area than another and the two areas are connected
- C) maintenance of a relatively stable internal environment
- D) equal amounts of something exist in areas that are connected

Answer: <https://biology-forums.com/index.php?topic=498213>

Question 873

The ductus arteriosus is a fetal vascular shunt that allows blood to flow from the pulmonary trunk directly into the aorta.

Answer: <https://biology-forums.com/index.php?topic=511388>

Question 874

Cholecystokinin (CCK) and secretin are produced by the duodenum to target the acinar cells of the pancreas.

Answer: <https://biology-forums.com/index.php?topic=501733>

Question 875

What is NOT a responsibility of insulin?

- A) gluconeogenesis and glycogenolysis
- B) promotion of satiety
- C) glycogen synthesis by the liver
- D) synthesis of fats from carbohydrates and lipids

Answer: <https://biology-forums.com/index.php?topic=501011>

Question 876

Mr. Jacobs fell and broke his olecranon. Explain the function of this bony projection.

Answer: <https://biology-forums.com/index.php?topic=498957>

Question 877

When are all oogonia formed in females?

- A) before birth
- B) during infancy
- C) at puberty
- D) early adulthood

Answer: <https://biology-forums.com/index.php?topic=511228>

Question 878

Identify the abdominopelvic cavity.

Answer: <https://biology-forums.com/index.php?topic=498234>

Question 879

Air travelers report less satisfaction with the taste of food served while flying. Given the dry climate and low humidity in an airplane, predict why food isn't as tasty in the skies.

Answer: <https://biology-forums.com/index.php?topic=500934>

Question 880

Carotene and hemoglobin are two minor skin pigments that contribute to skin color.

Answer: <https://biology-forums.com/index.php?topic=498715>

Question 881

What type of large, multinucleated cell destroys bone?

- A) chondroblast
- B) osteocyte
- C) osteoblast

D) osteoclast

Answer: <https://biology-forums.com/index.php?topic=498587>

Question 882

Self antigens usually generate an immune response in our own bodies.

Answer: <https://biology-forums.com/index.php?topic=501497>

Question 883

Visceral reflex arcs do NOT control:

- A) blood pressure.
- B) heart rate.
- C) digestion.
- D) voluntary muscle functions.

Answer: <https://biology-forums.com/index.php?topic=500730>

Question 884

What fibers are common in this tissue?

- A) collagen only
- B) reticular only
- C) both elastic and some reticular
- D) both elastic and some collagen

Answer: <https://biology-forums.com/index.php?topic=498579>

Question 885

Discuss some causes of hyponatremia.

Answer: <https://biology-forums.com/index.php?topic=511170>

Question 886

What are bone markings? Explain the difference between depressions, openings, and projections as related to bone markings.

Answer: <https://biology-forums.com/index.php?topic=498937>

Question 887

The basic function of the parasympathetic nervous system is to maintain homeostasis when the body is at rest.

Answer: <https://biology-forums.com/index.php?topic=500799>

Question 888

Which of these vitamins is water-soluble?

- A) vitamin A
- B) vitamin C
- C) vitamin D
- D) vitamin K

Answer: <https://biology-forums.com/index.php?topic=501833>

Question 889

Which type of muscle works together with the agonist?

- A) fixator
- B) synergist
- C) prime mover
- D) antagonist

Answer: <https://biology-forums.com/index.php?topic=500190>

Question 890

What organ is responsible for producing most of the plasma proteins known as the complement system?

- A) liver
- B) heart
- C) kidney
- D) spleen

Answer: <https://biology-forums.com/index.php?topic=501424>

Question 891

From superficial to deep, the three layers of the adrenal cortex are:

- A) zona glomerulosa, zona reticularis, zona fasciculata.
- B) zona glomerulosa, zona fasciculata, zona medullaris.
- C) zona fasciculata, zona intermedius, zona glomerulosa.
- D) zona glomerulosa, zona fasciculata, zona reticularis.

Answer: <https://biology-forums.com/index.php?topic=500990>

Question 892

Discuss the two different types of immunity.

Answer: <https://biology-forums.com/index.php?topic=501509>

Question 893

What stimulates melatonin production?

- A) increasing blood glucose levels
- B) light and dark cycles
- C) immune system
- D) increasing blood pressure

Answer: <https://biology-forums.com/index.php?topic=501017>

Question 894

Cushing's disease results from:

- A) hyposecretion of epinephrine.
- B) hypersecretion of cortisol.
- C) hyposecretion of insulin.
- D) hypersecretion of aldosterone.

Answer: <https://biology-forums.com/index.php?topic=501002>

Question 895

What is part of the respiratory zone?

- A) nose
- B) nasal cavity
- C) trachea
- D) alveoli

Answer: <https://biology-forums.com/index.php?topic=501533>

Question 896

Which of the following vessels can be used for taking the pulse?

- A) renal artery
- B) internal iliac artery
- C) brachial artery
- D) celiac trunk

Answer: <https://biology-forums.com/index.php?topic=501251>

Question 897

Which of the following is NOT part of the upper respiratory tract?

- A) nose
- B) pharynx
- C) trachea
- D) larynx

Answer: <https://biology-forums.com/index.php?topic=501532>

Question 898

Inherited traits controlled by two or more genes are called:

- A) incomplete dominance.
- B) polygenic inheritance.
- C) codominance.
- D) multiple alleles.

Answer: <https://biology-forums.com/index.php?topic=511375>

Question 899

Vital capacity =

- A) expiratory reserve volume + residual volume
- B) inspiratory reserve volume + residual volume
- C) tidal volume + inspiratory reserve volume + expiratory reserve volume
- D) inspiratory reserve volume + expiratory reserve volume + tidal volume + residual volume

Answer: <https://biology-forums.com/index.php?topic=501572>

Question 900

Calcitonin mainly targets and inhibits the activity of osteoclasts in bone.

Answer: <https://biology-forums.com/index.php?topic=501034>

Question 901

Which hormone stimulates the uptake of glucose by cells, lowering the concentration of glucose in the blood?

- A) cortisol
- B) insulin
- C) glucagon
- D) epinephrine

Answer: <https://biology-forums.com/index.php?topic=501813>

Question 902

What is the main component of all body fluids?

- A) blood
- B) oil
- C) water
- D) collagen

Answer: <https://biology-forums.com/index.php?topic=501991>

Question 903

Which organ system produces movement and generates heat?

- A) muscular system
- B) endocrine system
- C) skeletal system
- D) digestive system

Answer: <https://biology-forums.com/index.php?topic=498173>

Question 904

Determine the compensation for respiratory acidosis.

- A) decreasing secretion of hydrogen ions into the filtrate
- B) hypoventilation
- C) increasing reabsorption of bicarbonate ions from the filtrate
- D) hyperventilation

Answer: <https://biology-forums.com/index.php?topic=511135>

Question 905

What component allows semen to temporarily coagulate once ejaculated?

- A) alkaline pH
- B) antimicrobial chemicals
- C) fructose
- D) clotting proteins

Answer: <https://biology-forums.com/index.php?topic=511196>

Question 906

Hormones that act on the same target cells yet have opposite effects are said to be:

- A) synergists.
- B) hydrophilic hormones.
- C) antagonists.

D) neurohormones.

Answer: <https://biology-forums.com/index.php?topic=500955>

Question 907

What does the H in the pH scale represent?

- A) heat
- B) concentration of H⁺ ions in solution
- C) the negative logarithm
- D) negative charge

Answer: <https://biology-forums.com/index.php?topic=498317>

Question 908

What does cyanosis signify?

- A) A person has been exposed to too much sun.
- B) A person has been kept out of the sun.
- C) A person has oxygen-starved skin.
- D) A person has been exposed to cyanide.

Answer: <https://biology-forums.com/index.php?topic=498688>

Question 909

Which organ functions to absorb significant quantities of water, electrolytes, and vitamins?

- A) small intestine
- B) stomach
- C) large intestine
- D) spleen

Answer: <https://biology-forums.com/index.php?topic=501719>

Question 910

Which of the following wraps and surrounds an individual skeletal muscle fiber?

- A) endomysium
- B) sarcoplasmic reticulum
- C) perimysium
- D) epimysium

Answer: <https://biology-forums.com/index.php?topic=500296>

Question 911

For a male post-puberty, the majority of vellus hairs have transitioned to:

- A) arrector pili muscles.
- B) white hairs.
- C) terminal hairs.
- D) lanugo.

Answer: <https://biology-forums.com/index.php?topic=498694>

Question 912

Air inspired through the nasal cavity will travel through the nasopharynx, oropharynx, and then the laryngopharynx before entering the larynx.

Answer: <https://biology-forums.com/index.php?topic=501624>

Question 913

What type of polar covalent bond links amino acids?

- A) hydrophobic bond
- B) amphiphilic bond
- C) peptide bond
- D) ketone bond

Answer: <https://biology-forums.com/index.php?topic=498343>

Question 914

At what point in the brain do upper motor neurons of the corticospinal tracts decussate?

- A) pons
- B) medullary pyramids

- C) midbrain
- D) thalamus

Answer: <https://biology-forums.com/index.php?topic=500559>

Question 915

What structure is present on the second cervical vertebra (C2 or axis) that allows you to rotate your neck to say "no?"

- A) posterior tubercle
- B) transverse ligament
- C) dens (odontoid process)
- D) body

Answer: <https://biology-forums.com/index.php?topic=498885>

Question 916

Which of the following is NOT a function of neurons?

- A) carrying sensory information
- B) integration
- C) transmitting motor information
- D) forming the myelin sheath

Answer: <https://biology-forums.com/index.php?topic=500398>

Question 917

What occurs during the period of interphase known as the S phase?

- A) genetic material is divided between the daughter cells
- B) proteins, organelles, and cytosol are divided between the daughter cells
- C) the cell is rapidly synthesizing proteins
- D) DNA replication (synthesis) takes place

Answer: <https://biology-forums.com/index.php?topic=498459>

Question 918

Energy is released when ATP is broken down into ADP.

Answer: <https://biology-forums.com/index.php?topic=498382>

Question 919

Stratified squamous epithelium is composed of multiple layers of flattened cells.

Answer: <https://biology-forums.com/index.php?topic=498632>

Question 920

Squamous cell carcinoma arises from:

- A) keratinocytes in stratum corneum.
- B) melanocytes.
- C) keratinocytes in stratum basale.
- D) keratinocytes in stratum spinosum.

Answer: <https://biology-forums.com/index.php?topic=498706>

Question 921

An injury to the spinal cord is not possible below the:

- A) second thoracic vertebra.
- B) second lumbar vertebra.
- C) fourth cervical vertebra.
- D) ninth thoracic vertebra.

Answer: <https://biology-forums.com/index.php?topic=500544>

Question 922

The volume of blood pumped by each ventricle in one heartbeat is known as:

- A) end-diastolic volume (EDV).
- B) stroke volume (SV).
- C) heart rate (HR).
- D) cardiac output (CO).

Answer: <https://biology-forums.com/index.php?topic=501146>

Question 923

What part of the brain is the "boss" of the autonomic nervous system (ANS)?

- A) thalamus
- B) hypothalamus
- C) pons
- D) basal nuclei

Answer: <https://biology-forums.com/index.php?topic=500565>

Question 924

Nail production occurs at the nail:

- A) body.
- B) bed.
- C) root.
- D) cuticle.

Answer: <https://biology-forums.com/index.php?topic=498697>

Question 925

What function is NOT lateralized in one of the cerebral hemispheres?

- A) creativity
- B) facial recognition
- C) language-related recognition
- D) emotion

Answer: <https://biology-forums.com/index.php?topic=500574>

Question 926

Where are the preganglionic neurons of the sympathetic nervous system located?

- A) thoracolumbar region of the spinal cord
- B) cervical region and sacral region of the spinal cord
- C) cranial nerves and the sacral region of the spinal cord
- D) cranial nerves and the lumbar region of the spinal cord

Answer: <https://biology-forums.com/index.php?topic=500738>

Question 927

A person who is standing facing forward with hands at the sides, palms facing forward, is in the:

- A) supine position.
- B) anatomical position.
- C) frontal position.
- D) sagittal position.

Answer: <https://biology-forums.com/index.php?topic=498178>

Question 928

What would NOT lead to hydrocephalus?

- A) not enough CSF reabsorbed by the arachnoid granulations
- B) excessive CSF production
- C) blockage of CSF circulation
- D) deficient CSF production

Answer: <https://biology-forums.com/index.php?topic=500537>

Question 929

Avery has high blood pressure and hypernatremia (excess blood sodium ion concentration). The hypersecretion of which hormone could lead to his condition?

- A) calcitonin
- B) insulin
- C) aldosterone
- D) glucagon

Answer: <https://biology-forums.com/index.php?topic=500996>

Question 930

The return of calcium ions to the sarcoplasmic reticulum during muscle relaxation decreases the calcium ion concentration in the cytosol.

Answer: <https://biology-forums.com/index.php?topic=500374>

Question 931

Which of the following is NOT a surface barrier serving as the first line of defense?

- A) antibody
- B) mucus
- C) oil
- D) keratin

Answer: <https://biology-forums.com/index.php?topic=501417>

Question 932

Determine the net filtration pressure (NFP) if capillary hydrostatic pressure is 40 mm Hg and the colloid osmotic pressure is 25 mm Hg.

- A) 15 mm Hg
- B) -15 mm Hg
- C) 45 mm Hg
- D) 25 mm Hg

Answer: <https://biology-forums.com/index.php?topic=501240>

Question 933

What predicts the element to which an atom belongs?

- A) total number of electrons
- B) total number of protons
- C) total number of neutrons
- D) number of electrons in the first shell

Answer: <https://biology-forums.com/index.php?topic=498277>

Question 934

Discuss some of the effects of epinephrine and norepinephrine in response to a stressor.

Answer: <https://biology-forums.com/index.php?topic=501054>

Question 935

Synovial membranes:

- A) are hard due to the presence of keratin.
- B) line the cavities surrounding freely movable joints.
- C) line the passages of hollow organs that open to the outside of the body.
- D) line the pleural, pericardial, and peritoneal body cavities.

Answer: <https://biology-forums.com/index.php?topic=498604>

Question 936

Describe anatomical position.

Answer: <https://biology-forums.com/index.php?topic=498242>

Question 937

Glucosuria and ketonuria are characteristic of:

- A) diabetes mellitus.
- B) Hashimoto's thyroiditis.
- C) diabetes insipidus.
- D) Graves' disease.

Answer: <https://biology-forums.com/index.php?topic=501013>

Question 938

Who experiences a greater amount of bone deposition: a person who routinely exercises or a sedentary person? Explain your choice.

Answer: <https://biology-forums.com/index.php?topic=498829>

Question 939

Control of skeletal muscle is the responsibility of:

- A) a somatic motor neuron.
- B) a preganglionic neuron.

- C) an autonomic ganglion.
- D) a postganglionic neuron.

Answer: <https://biology-forums.com/index.php?topic=500734>

Question 940

Trauma to stratum basale would NOT interfere with the skin's ability to:

- A) shed dead cells.
- B) grow.
- C) produce vitamin D.
- D) produce melanin.

Answer: <https://biology-forums.com/index.php?topic=498666>

Question 941

Discuss the functions of the paranasal sinuses.

Answer: <https://biology-forums.com/index.php?topic=498941>

Question 942

The superiorly positioned spinalis and longissimus groups of the erector spinae muscles each have a capitis muscle, cervicis muscle, and thoracis muscle.

Answer: <https://biology-forums.com/index.php?topic=500257>

Question 943

Where does the cell body of the preganglionic neuron originate?

- A) peripheral nervous system (PNS)
- B) postganglionic neuron
- C) central nervous system (CNS)
- D) target cell

Answer: <https://biology-forums.com/index.php?topic=500736>

Question 944

Discuss the compensation for metabolic alkalosis.

Answer: <https://biology-forums.com/index.php?topic=511175>

Question 945

Determine fluid movement when hydrostatic pressure exceeds colloid osmotic pressure at the arteriolar end of the capillary.

- A) water is pushed into the capillary by absorption
- B) water is pushed of the capillary by filtration
- C) there is no net movement of water
- D) water is pulled into the capillary by absorption

Answer: <https://biology-forums.com/index.php?topic=501238>

Question 946

What name does the femoral artery take as it emerges in the posterior thigh?

- A) posterior tibial artery
- B) anterior tibial artery
- C) popliteal artery
- D) dorsalis pedis artery

Answer: <https://biology-forums.com/index.php?topic=501250>

Question 947

A heavily-pregnant woman who walks with a swayback exhibits:

- A) either scoliosis or kyphosis.
- B) lordosis (or hyperlordosis).
- C) scoliosis.
- D) kyphosis.

Answer: <https://biology-forums.com/index.php?topic=498882>

Question 948

Opposition and reposition occur only at the thumb or the first carpometacarpal joint.

Answer: <https://biology-forums.com/index.php?topic=499036>

Question 949

The cranial nerves that have neural connections with the tongue include all of the following EXCEPT:

- A) trochlear nerve (IV).
- B) trigeminal nerve (V).
- C) facial nerve (VII).
- D) glossopharyngeal nerve (IX).

Answer: <https://biology-forums.com/index.php?topic=500635>

Question 950

When you go outside on a hot summer day, your body temperature heats up above the normal range. Receptors in your brain detect the change in body temperature. The brain activates nerve cells that send messages to sweat glands, causing the body temperature to fall as the sweat evaporates from the skin. What part of this feedback loop is the effector?

- A) increased body temperature
- B) brain
- C) nerve cells
- D) sweat glands

Answer: <https://biology-forums.com/index.php?topic=498208>

Question 951

Explain the significance of the dens (odontoid process) which is present on the second cervical vertebra (C2 or axis).

Answer: <https://biology-forums.com/index.php?topic=498944>

Question 952

Brown adipose tissue is found in:

- A) infants and young children.
- B) adolescents.
- C) males of any age.
- D) adults.

Answer: <https://biology-forums.com/index.php?topic=498577>

Question 953

Which process is NOT a main function of the stomach?

- A) absorption
- B) secretion
- C) propulsion
- D) digestion

Answer: <https://biology-forums.com/index.php?topic=501673>

Question 954

Rolita had the mumps as a child and experienced swelling in the parotid glands. What do these glands secrete?

- A) tears
- B) saliva
- C) oil
- D) sweat

Answer: <https://biology-forums.com/index.php?topic=501658>

Question 955

A cerebrovascular accident (CVA, or stroke) can occur due to a blockage in the:

- A) axillary artery.
- B) facial artery.
- C) basilar artery.
- D) occipital artery.

Answer: <https://biology-forums.com/index.php?topic=501246>

Question 956

The elbow and knee joints are similar in that their primary motions are:

- A) abduction and adduction.

- B) rotation and circumduction.
- C) flexion and extension.
- D) inversion and eversion.

Answer: <https://biology-forums.com/index.php?topic=499017>

Question 957

During a transfusion, if incompatible antigens are introduced, antibodies can bind to foreign antigens, causing them to clump together, or:

- A) activate.
- B) coagulate.
- C) agglutinate.
- D) granulate.

Answer: <https://biology-forums.com/index.php?topic=501357>

Question 958

Trace the pathway of an image formed on the retina to the primary visual cortex in the brain.

Answer: <https://biology-forums.com/index.php?topic=500929>

Question 959

If the thymus shrank and stopped making hormones in a child, we would expect to see a decrease in the number of:

- A) B lymphocytes (B cells).
- B) neutrophils.
- C) T lymphocytes (T cells).
- D) eosinophils.

Answer: <https://biology-forums.com/index.php?topic=501413>

Question 960

Jerry had an ulcer affecting the innermost epithelium of the stomach facing the lumen. Which layer of the alimentary canal was ulcerated?

- A) mucosa
- B) muscularis externa
- C) serosa (adventitia)
- D) submucosa

Answer: <https://biology-forums.com/index.php?topic=501649>

Question 961

Reflexes are programmed, automatic, and rapid responses to stimuli.

Answer: <https://biology-forums.com/index.php?topic=500700>

Question 962

Instead of using the directional terms superior and inferior to describe positions on the upper and lower limbs, what directional terms are used? Define these terms.

Answer: <https://biology-forums.com/index.php?topic=498243>

Question 963

Which statement best describes the circadian rhythm?

- A) In a 24-hour period of time, we feel the most awake after eating breakfast.
- B) In a 24-hour period of time, we spend a period of time awake and a period of time asleep.
- C) In a 24-hour period of time, adults require at least 8 hours of sleep to feel rested.
- D) In a 24-hour period of time, we feel most sleepy during brightest period of the day.

Answer: <https://biology-forums.com/index.php?topic=500566>

Question 964

Which organ system is lined by transitional epithelium to accommodate stretching?

- A) urinary system
- B) digestive system
- C) respiratory system
- D) muscular system

Answer: <https://biology-forums.com/index.php?topic=498570>

Question 965

Cerebrospinal fluid drains into:

- A) dural sinuses.
- B) external jugular vein.
- C) facial vein.
- D) the azygos system.

Answer: <https://biology-forums.com/index.php?topic=501255>

Question 966

Agglutination occurs when blood type B+ receives blood type O- in a transfusion.

Answer: <https://biology-forums.com/index.php?topic=501371>

Question 967

Damage to the enteric nervous system that innervates the digestive organs could affect:

- A) motility.
- B) deglutition.
- C) salivation.
- D) mastication.

Answer: <https://biology-forums.com/index.php?topic=501646>

Question 968

What activity is occurring in the heart during the Q-T interval on an electrocardiogram (ECG)?

- A) The atrial cells are undergoing action potentials.
- B) The ventricular cells are repolarizing.
- C) The AV node delay occurs as the action potential spreads from the SA node to the atria to the ventricles.
- D) The ventricular cells are undergoing action potentials.

Answer: <https://biology-forums.com/index.php?topic=501128>

Question 969

Discuss the chronotropic effects of the sympathetic and parasympathetic nervous systems on the heart.

Answer: <https://biology-forums.com/index.php?topic=501185>

Question 970

Water is attracted to the compartment with a lower osmotic pressure.

Answer: <https://biology-forums.com/index.php?topic=498490>

Question 971

A mutation has damaged the formation of oxaloacetate. What process will be impaired?

- A) chemiosmosis
- B) citric acid cycle
- C) electron transport chain
- D) ATP synthase

Answer: <https://biology-forums.com/index.php?topic=501780>

Question 972

Myofilaments shorten to produce muscle contractions according to the sliding filament mechanism.

Answer: <https://biology-forums.com/index.php?topic=500368>

Question 973

What type of cell is activated in lymphatic tissue by macrophages presenting antigens during a viral infection?

- A) natural killer (NK) cell
- B) helper T (TH) cell
- C) plasma cell
- D) memory B cell

Answer: <https://biology-forums.com/index.php?topic=501478>

Question 974

The three types of cones are designated:

- A) yellow, red, and blue.
- B) red, yellow, and blue.

C) red, green, and yellow.

D) red, green, and blue.

Answer: <https://biology-forums.com/index.php?topic=500864>

Question 975

Define homeostasis and homeostatic imbalance.

Answer: <https://biology-forums.com/index.php?topic=498249>

Question 976

Which cranial nerve is generally thought of as a mixed nerve?

A) hypoglossal nerve (XII)

B) vestibulocochlear nerve (VIII)

C) accessory nerve (XI)

D) glossopharyngeal nerve (IX)

Answer: <https://biology-forums.com/index.php?topic=500633>

Question 977

The inability to recognize a family member indicates impairment in the:

A) parietal lobe.

B) dorsal pathway.

C) ventral pathway.

D) pretectal area.

Answer: <https://biology-forums.com/index.php?topic=500871>

Question 978

Which of the following does NOT correctly describe water?

A) Water is constructed of polar covalent bonds.

B) Water has a low heat capacity.

C) Water cushions the body's structures.

D) Water can dissolve ionic compounds.

Answer: <https://biology-forums.com/index.php?topic=498313>

Question 979

Converging neural circuits are opposite to diverging neural circuits.

Answer: <https://biology-forums.com/index.php?topic=500474>

Question 980

The proximal tubule is lined with simple cuboidal epithelium and microvilli.

Answer: <https://biology-forums.com/index.php?topic=501973>

Question 981

Which division of the peripheral nervous system (PNS) detects stimuli and carries them to the central nervous system (CNS)?

A) sensory

B) motor

C) autonomic

D) sympathetic

Answer: <https://biology-forums.com/index.php?topic=500624>

Question 982

What is NOT true of the effects of hypoventilation?

A) carbonic acid concentration in the blood increases

B) blood pH decreases

C) partial pressure of carbon dioxide in the blood increases

D) hydrogen ion concentration in the blood decreases

Answer: <https://biology-forums.com/index.php?topic=501590>

Question 983

Upon entering your house, you noticed the smell of cake baking in the oven. What division of the peripheral nervous system is responsible?

A) visceral motor division

- B) somatic motor division
- C) somatic sensory division
- D) visceral sensory division

Answer: <https://biology-forums.com/index.php?topic=500393>

Question 984

Which statement best describes the function of myoglobin?

- A) Myoglobin hydrolyzes ATP.
- B) Myoglobin is a source of ATP for muscles.
- C) Myoglobin catabolizes glycogen.
- D) Myoglobin stores oxygen in muscle cells.

Answer: <https://biology-forums.com/index.php?topic=500323>

Question 985

What function do intercalated discs serve in cardiac muscle tissue?

Answer: <https://biology-forums.com/index.php?topic=498623>

Question 986

Which organelle modifies, sorts, and packages proteins and lipids for export from the cell?

- A) Golgi apparatus
- B) cytoskeleton
- C) endoplasmic reticulum
- D) mitochondrion

Answer: <https://biology-forums.com/index.php?topic=498428>

Question 987

What does the first cervical vertebra (C1 or atlas) lack?

- A) inferior articular facet
- B) superior articular facet
- C) vertebral body and spinous process
- D) vertebral foramen

Answer: <https://biology-forums.com/index.php?topic=498884>

Question 988

Identify the brachialis muscle.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500230>

Question 989

Name this tissue.

- A) skeletal muscle tissue
- B) dense irregular connective tissue
- C) cardiac muscle tissue
- D) smooth muscle tissue

Answer: <https://biology-forums.com/index.php?topic=498594>

Question 990

The ABO blood group is based on which antigen(s)?

- A) antigens A and B
- B) antigen Rh
- C) antigen O
- D) antigen D

Answer: <https://biology-forums.com/index.php?topic=501356>

Question 991

The digestive system is regulated by the sympathetic, parasympathetic, and enteric nervous systems.

Answer: <https://biology-forums.com/index.php?topic=501720>

Question 992

The binding of a myosin head to an actin molecule is termed a:

- A) power stroke.
- B) triad.
- C) crossbridge.
- D) synaptic cleft.

Answer: <https://biology-forums.com/index.php?topic=500315>

Question 993

Explain how the metabolic rate differs from the basal metabolic rate (BMR).

Answer: <https://biology-forums.com/index.php?topic=501870>

Question 994

By which method can large substances cross the endothelial cells and exit a capillary?

- A) transcytosis
- B) facilitated diffusion
- C) osmosis
- D) diffusion

Answer: <https://biology-forums.com/index.php?topic=501229>

Question 995

Transamination results in an ammonia-containing product that can be eliminated by the kidneys in the urine called:

- A) bilirubin.
- B) bicarbonate ion.
- C) urea.
- D) creatinine.

Answer: <https://biology-forums.com/index.php?topic=501797>

Question 996

Which statement best describes epithelial tissue?

- A) Simple epithelia are commonly found in areas of high mechanical abrasion.
- B) Paracellular or transcellular transport moves substances across simple epithelia.
- C) Pseudostratified epithelia are commonly keratinized.
- D) Stratified epithelia are associated with diffusion, osmosis, and filtration.

Answer: <https://biology-forums.com/index.php?topic=498559>

Question 997

Discuss immunological memory and the role of T cells in its formation.

Answer: <https://biology-forums.com/index.php?topic=501517>

Question 998

What muscles, present in the ventricles, anchor by tendon-like chords called chordae tendineae?

- A) ligamentum arteriosum
- B) papillary muscles
- C) pectinate muscles
- D) trabeculae carneae

Answer: <https://biology-forums.com/index.php?topic=501095>

Question 999

Which of the following muscles extends the knee?

- A) adductor magnus
- B) gracilis
- C) sartorius
- D) rectus femoris

Answer: <https://biology-forums.com/index.php?topic=500235>

Question 1000

Which system works opposite to the sympathetic nervous system?

- A) sensory nervous system
- B) somatic nervous system
- C) parasympathetic nervous system
- D) central nervous system

Answer: <https://biology-forums.com/index.php?topic=500788>

Question 1001

What is NOT one of the four core principles related to homeostasis?

- A) metabolism
- B) cell-cell communication
- C) feedback loops
- D) gradients

Answer: <https://biology-forums.com/index.php?topic=498217>

Question 1002

Mean arterial pressure generally measures around 120/80 mm Hg.

Answer: <https://biology-forums.com/index.php?topic=501267>

Question 1003

What hormone is released to decrease blood pressure?

- A) angiotensin-II
- B) atrial natriuretic peptide (ANP)
- C) aldosterone
- D) antidiuretic hormone (ADH)

Answer: <https://biology-forums.com/index.php?topic=501225>

Question 1004

Explain the difference between true ribs, false ribs, and floating ribs.

Answer: <https://biology-forums.com/index.php?topic=498945>

Question 1005

The mucosa of the carina contains sensory receptors that trigger:

- A) coughing.
- B) hiccups.
- C) yawning.
- D) sneezing.

Answer: <https://biology-forums.com/index.php?topic=501547>

Question 1006

Hypersecretion of growth hormone after the epiphyseal plates closes causes a disorder known as:

- A) gigantism
- B) acromegaly
- C) pituitary dwarfism
- D) congenital hypothyroidism

Answer: <https://biology-forums.com/index.php?topic=500974>

Question 1007

The somatic sensory division of the peripheral nervous system (PNS) carries stimuli from both general and special senses to the central nervous system (CNS).

Answer: <https://biology-forums.com/index.php?topic=500687>

Question 1008

Along which line of the embryo does the primitive streak form?

- A) dorsal-ventral
- B) right-left
- C) lateral-medial
- D) cephalic-caudal

Answer: <https://biology-forums.com/index.php?topic=511317>

Question 1009

The differentiation of the germ layers into organs and organ systems is known as:

- A) gastrulation.
- B) ingression.
- C) organogenesis.
- D) embryonic folding.

Answer: <https://biology-forums.com/index.php?topic=511325>

Question 1010

Decline in male reproductive functions occur during:

- A) menopause.
- B) menarche.
- C) andropause.
- D) puberty.

Answer: <https://biology-forums.com/index.php?topic=511214>

Question 1011

An elevated sodium ion concentration is known as:

- A) hypernatremia.
- B) hypercalcemia.
- C) hypokalemia.
- D) hypoglycemia.

Answer: <https://biology-forums.com/index.php?topic=502022>

Question 1012

What does NOT form the respiratory membrane?

- A) type II alveolar cells
- B) capillary endothelial cells
- C) basal lamina of the type I alveolar cells
- D) type I alveolar cells

Answer: <https://biology-forums.com/index.php?topic=501556>

Question 1013

The amount of blood remaining in each ventricle at the end of the ventricular ejection phase is normally about:

- A) 30 ml.
- B) 50 ml.
- C) 70 ml.
- D) 120 ml.

Answer: <https://biology-forums.com/index.php?topic=501134>

Question 1014

Which of the following is NOT a function of antibodies?

- A) phagocytosis
- B) opsonization
- C) neutralization
- D) agglutination

Answer: <https://biology-forums.com/index.php?topic=501473>

Question 1015

Summarize the processes of spermatogenesis and spermiogenesis.

Answer: <https://biology-forums.com/index.php?topic=511272>

Question 1016

The sympathetic nervous system, or craniosacral division, involves four cranial nerves and sacral nerves S2 - S4.

Answer: <https://biology-forums.com/index.php?topic=500800>

Question 1017

What is meant by N2?

- A) Two nitrogen atoms formed a molecule.
- B) The atomic number of nitrogen is two.
- C) Two nitrogen atoms form a compound.
- D) The atomic mass of nitrogen is two.

Answer: <https://biology-forums.com/index.php?topic=498291>

Question 1018

The triplet codes in DNA needed to specify a specific polypeptide chain are found in the:

- A) cytoplasm.
- B) gene.
- C) codon of mRNA.
- D) anticodon of tRNA.

Answer: <https://biology-forums.com/index.php?topic=498441>

Question 1019

The term diploë refers to the:

- A) double-layered nature of the connective tissue covering the bone.
- B) fact that most bones are formed of two types of bone tissue.
- C) internal layer of spongy bone in flat bones.
- D) two types of marrow found within most bones.

Answer: <https://biology-forums.com/index.php?topic=498746>

Question 1020

Determine for what condition Jourdan should take an antipyretic medication.

Answer: <https://biology-forums.com/index.php?topic=501515>

Question 1021

Determine the effects of metformin, a drug that suppresses gluconeogenesis, on blood glucose levels.

Answer: <https://biology-forums.com/index.php?topic=501877>

Question 1022

B cell proliferation occurs when an antigen binds to a B-cell receptor on the surface of a specific B-cell clone.

Answer: <https://biology-forums.com/index.php?topic=501499>

Question 1023

Stroke volume averages about:

- A) 25 ml per heart beat.
- B) 70 ml per heart beat.
- C) 120 ml per heart beat.
- D) 180 ml per heart beat.

Answer: <https://biology-forums.com/index.php?topic=501147>

Question 1024

A cell with 12 pairs of homologous chromosomes is said to be diploid, 2n.

Answer: <https://biology-forums.com/index.php?topic=511253>

Question 1025

Endergonic reactions release more energy than is needed to proceed.

Answer: <https://biology-forums.com/index.php?topic=501839>

Question 1026

What type of protein fiber, commonly found in the extracellular matrix, is extensible?

- A) collagen
- B) keratin
- C) elastic
- D) reticular

Answer: <https://biology-forums.com/index.php?topic=498552>

Question 1027

The most superficial component of the skin is the:

- A) loose connective tissue.
- B) epidermis.
- C) hypodermis.
- D) dermis.

Answer: <https://biology-forums.com/index.php?topic=498647>

Question 1028

The conduction of an action potential is faster in unmyelinated axons than in myelinated axons.

Answer: <https://biology-forums.com/index.php?topic=500465>

Question 1029

Into what vein do the splenic, gastric, superior mesenteric, and inferior mesenteric veins drain?

- A) hepatic vein
- B) inferior vena cava
- C) inferior epigastric vein
- D) hepatic portal vein

Answer: <https://biology-forums.com/index.php?topic=501258>

Question 1030

Trace the pathway of filtrate as it flows through the renal tubule starting with the proximal tubule and ending with arrival at the collecting duct.

Answer: <https://biology-forums.com/index.php?topic=501955>

Question 1031

If a patient inhales as deeply as possible and then exhales as much as possible, the volume of air expelled would be the patient's:

- A) tidal volume.
- B) inspiratory reserve volume.
- C) expiratory reserve volume.
- D) vital capacity.

Answer: <https://biology-forums.com/index.php?topic=501575>

Question 1032

Why is blood a unique type of connective tissue?

Answer: <https://biology-forums.com/index.php?topic=498622>

Question 1033

What portion of the uterus is composed of smooth muscle and contracts rhythmically during orgasm and childbirth?

- A) peritoneum
- B) perimetrium
- C) endometrium
- D) myometrium

Answer: <https://biology-forums.com/index.php?topic=511222>

Question 1034

How many codons are present in the following strand of mRNA?

T A C G G T A G T A T G

- A) 3
- B) 4
- C) 6
- D) 12

Answer: <https://biology-forums.com/index.php?topic=498448>

Question 1035

What two systems are interfaced by the adrenal medulla?

- A) somatic nervous system and autonomic nervous system
- B) parasympathetic nervous system and endocrine system
- C) sympathetic nervous system and endocrine system

D) parasympathetic nervous system and sympathetic nervous system

Answer: <https://biology-forums.com/index.php?topic=500765>

Question 1036

Heather damaged cartilage in her joint while exercising. She learned that she will have to wait a few months before returning to physical activity. Discuss why cartilage, in general, is slow to heal.

Answer: <https://biology-forums.com/index.php?topic=498620>

Question 1037

The pulmonary circuit involves blood flow from the heart to and from the:

- A) lungs.
- B) body.
- C) liver.
- D) brain.

Answer: <https://biology-forums.com/index.php?topic=501079>

Question 1038

What connects the hypothalamus and pituitary gland?

- A) vermis
- B) isthmus
- C) infundibulum
- D) medulla oblongata

Answer: <https://biology-forums.com/index.php?topic=500957>

Question 1039

The transfer of an electron from sodium to chlorine is an example of:

- A) sound energy.
- B) chemical energy.
- C) electrical energy.
- D) mechanical energy.

Answer: <https://biology-forums.com/index.php?topic=498301>

Question 1040

A procedure known as median sternotomy is used to cut through the sternum to open the thoracic cavity. Determine the portions of the sternum that must be cut, from superior to inferior, during this procedure. To which bone(s) or cartilage(s) does each portion of the sternum articulate?

Answer: <https://biology-forums.com/index.php?topic=498956>

Question 1041

The reticular formation is a collection of nuclei in the diencephalon.

Answer: <https://biology-forums.com/index.php?topic=500583>

Question 1042

A patient with a body temperature of 38° C (or 99° F) is said to have a fever.

Answer: <https://biology-forums.com/index.php?topic=501496>

Question 1043

Which blood vessels are innervated by the parasympathetic nervous system?

- A) vessels of the digestive system
- B) vessels of the penis
- C) vessels of the respiratory system
- D) vessels of the urinary system

Answer: <https://biology-forums.com/index.php?topic=500787>

Question 1044

What cells are responsible for cell-mediated immunological memory in which the immune response is expedited upon subsequent exposure to an antigen?

- A) memory T cells
- B) effector cells
- C) B cells

D) MHC molecules

Answer: <https://biology-forums.com/index.php?topic=501438>

Question 1045

The primary motor cortex of the right cerebral hemisphere:

- A) integrates senses from multiple different sources.
- B) controls the motor activity on the left side of the body.
- C) receives and processes sensory input.
- D) controls the motor activity on the right side of the body.

Answer: <https://biology-forums.com/index.php?topic=500515>

Question 1046

Which of the following is NOT an effect of the parasympathetic nervous system?

- A) constriction of the pupil
- B) decreased heart rate
- C) increased sweat secretion
- D) bronchoconstriction

Answer: <https://biology-forums.com/index.php?topic=500785>

Question 1047

The region of skin that provides a tough barrier against pathogens and trauma is the:

- A) epidermis.
- B) dermis.
- C) hypodermis.
- D) subcutaneous layer.

Answer: <https://biology-forums.com/index.php?topic=498654>

Question 1048

During defecation, we hold our breath, bear down, and strain. Explain the effects of holding one's breath on blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501296>

Question 1049

Which wave on the electrocardiogram (ECG) represents ventricular depolarization?

- A) P wave
- B) QRS wave
- C) T wave
- D) R-R interval

Answer: <https://biology-forums.com/index.php?topic=501124>

Question 1050

Jasmine has high blood pressure and an increased glomerular filtration rate (GFR). How does the tubuloglomerular feedback mechanism restore normal pressure in her glomerulus?

- A) The juxtaglomerular (JG) cells decrease production of renin.
- B) The afferent arteriole vasodilates.
- C) The juxtaglomerular (JG) cells increase production of renin.
- D) The efferent arteriole constricts.

Answer: <https://biology-forums.com/index.php?topic=501921>

Question 1051

Which of the following cells is associated with the dermis?

- A) keratinocyte
- B) melanocyte
- C) dendritic (Langerhans) cell
- D) fibroblast

Answer: <https://biology-forums.com/index.php?topic=498679>

Question 1052

What vessel delivers oxygenated blood to systemic capillaries for gas exchange?

- A) pulmonary trunk

- B) aorta
- C) coronary artery
- D) circumflex artery

Answer: <https://biology-forums.com/index.php?topic=501103>

Question 1053

Which process is a squeezing motion of the circular layer of smooth muscle in the small intestine?

- A) segmentation
- B) peristalsis
- C) deglutition
- D) defecation

Answer: <https://biology-forums.com/index.php?topic=501686>

Question 1054

Summarize how the three types of fibrous joints are structurally similar.

Answer: <https://biology-forums.com/index.php?topic=499044>

Question 1055

Harrie has recurring kidney stones. Which hormone should be checked for normal levels?

- A) triiodothyronine (T3)
- B) thyroxine (T4)
- C) calcitonin
- D) parathyroid hormone (PTH)

Answer: <https://biology-forums.com/index.php?topic=500988>

Question 1056

What is NOT a major function of the normal flora of the large intestine?

- A) metabolize undigested wastes
- B) inhibit the immune system
- C) produce vitamins
- D) deter the growth of harmful bacteria

Answer: <https://biology-forums.com/index.php?topic=501692>

Question 1057

Having to adjust to a dark room after walking in from bright light is because:

- A) rods exposed to bright light need time to regenerate rhodopsin.
- B) the lens requires time to accommodate dim light.
- C) rhodopsin does not function in dim light.
- D) only cones function in dim light.

Answer: <https://biology-forums.com/index.php?topic=500869>

Question 1058

Calcium ion entry into the axon terminal is necessary for the release of neurotransmitter into the synaptic cleft.

Answer: <https://biology-forums.com/index.php?topic=500472>

Question 1059

Striations are a structural feature associated with some:

- A) neurons.
- B) muscle cells.
- C) adipocytes.
- D) fibroblasts.

Answer: <https://biology-forums.com/index.php?topic=498590>

Question 1060

Which of the following is the inner germ layer?

- A) ectoderm
- B) mesoderm
- C) endoderm
- D) epiblast

Answer: <https://biology-forums.com/index.php?topic=511323>

Question 1061

Angie received an injection in her deltoid muscle. Her arm is now sore and she refuses to move it. What action can she not perform?

Answer: <https://biology-forums.com/index.php?topic=500274>

Question 1062

What smaller cavity within the thoracic cavity houses the heart, great blood vessels, esophagus, and trachea?

- A) mediastinum
- B) diaphragm
- C) peritoneal cavity
- D) abdominal cavity

Answer: <https://biology-forums.com/index.php?topic=498196>

Question 1063

Which of the following atoms is inert?

- A) atomic number of 6
- B) atomic number of 8
- C) atomic number of 10
- D) atomic number of 14

Answer: <https://biology-forums.com/index.php?topic=498287>

Question 1064

The majority of blood is plasma.

Answer: <https://biology-forums.com/index.php?topic=501362>

Question 1065

Since epithelial tissues are avascular, diffusion carries oxygen and nutrients to the cells.

Answer: <https://biology-forums.com/index.php?topic=498629>

Question 1066

When a photoreceptor cell is stimulated by light:

- A) sodium ions enter the outer segment of the photoreceptor and depolarize it.
- B) transducin and phosphodiesterase (PDE) are inactive.
- C) the photoreceptor hyperpolarizes as sodium ion channels close.
- D) opsin and cis-retinal combine to form rhodopsin.

Answer: <https://biology-forums.com/index.php?topic=500866>

Question 1067

A triad consists of:

- A) a transverse tubule (T-tubule) and two terminal cisternae.
- B) a fascicle of skeletal muscle cells and its surrounding perimysium.
- C) actin filaments, troponin, and tropomyosin.
- D) myosin filaments, myosin heads, and myosin tails.

Answer: <https://biology-forums.com/index.php?topic=500293>

Question 1068

During which phase of mitosis are sister chromatids separated when the mitotic spindle fibers shorten?

- A) anaphase
- B) metaphase
- C) prophase
- D) telophase

Answer: <https://biology-forums.com/index.php?topic=498466>

Question 1069

The function of the renin-angiotensin-aldosterone system (RAAS) is to decrease systemic blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501978>

Question 1070

What tissue serves as the model for bones formed during endochondral ossification?

- A) spongy bone
- B) hyaline cartilage
- C) compact bone
- D) fibrocartilage

Answer: <https://biology-forums.com/index.php?topic=498777>

Question 1071

What process divides the cytosol, organelles, and proteins?

- A) cytokinesis
- B) mitosis
- C) prophase
- D) synthesis

Answer: <https://biology-forums.com/index.php?topic=498465>

Question 1072

Discuss how the mucosa of the ureters and urinary bladder are well suited to their functions.

Answer: <https://biology-forums.com/index.php?topic=501969>

Question 1073

Although saddle joints are biaxial like condylar and hinge joints, they provide a greater amount of motion than either condylar or hinge joints.

Answer: <https://biology-forums.com/index.php?topic=499038>

Question 1074

What detects dynamic equilibrium?

- A) cochlea
- B) crista ampullaris
- C) spiral organ (organ of Corti)
- D) utricle and saccule

Answer: <https://biology-forums.com/index.php?topic=500896>

Question 1075

Dwain is drinking a cup of coffee which has a pH of 5. Compare Dwain's coffee to his friend's coffee which has a pH of 6.

Answer: <https://biology-forums.com/index.php?topic=498363>

Question 1076

The two anatomical divisions of the nervous system are the:

- A) sensory division and motor division.
- B) central nervous system and peripheral nervous system.
- C) somatic sensory division and visceral sensory system.
- D) visceral motor division and somatic motor division.

Answer: <https://biology-forums.com/index.php?topic=500392>

Question 1077

Elevated levels of neutrophils indicate:

- A) bacterial infection.
- B) viral infection.
- C) cancer.
- D) normal condition.

Answer: <https://biology-forums.com/index.php?topic=501480>

Question 1078

Summarize how the countercurrent multiplier system produces concentrated urine in juxtamedullary nephrons.

Answer: <https://biology-forums.com/index.php?topic=501966>

Question 1079

Where does blood in the arcuate artery travel next on its journey toward the glomerulus?

- A) interlobar artery
- B) segmental artery
- C) interlobular (cortical radiate) artery
- D) renal artery

Answer: <https://biology-forums.com/index.php?topic=501890>

Question 1080

Explain the ABCDE rule used to distinguish melanomas from other skin cancers and from normal moles.

Answer: <https://biology-forums.com/index.php?topic=498734>

Question 1081

Which bone marking provides a site where bones articulate or to which ligaments and tendons attach?

- A) opening
- B) depression
- C) foramen
- D) projection

Answer: <https://biology-forums.com/index.php?topic=498854>

Question 1082

Stroke volume (SV) can be calculated by subtracting the end-diastolic volume (EDV) from the end-systolic volume (ESV).

Answer: <https://biology-forums.com/index.php?topic=501164>

Question 1083

Mammary glands are specialized:

- A) sweat glands.
- B) holocrine glands.
- C) sebaceous glands.
- D) ceruminous glands.

Answer: <https://biology-forums.com/index.php?topic=498700>

Question 1084

Labor progresses through the following three stages:

- A) dilation, expansion, and pushing stages.
- B) duration, expansion, and placental stages.
- C) dilation, effacing, and placental stages.
- D) dilation, expulsion, and placental stages.

Answer: <https://biology-forums.com/index.php?topic=511356>

Question 1085

The ABCDE rule is used to distinguish normal moles from:

- A) squamous cell carcinoma.
- B) basal cell carcinoma.
- C) freckles.
- D) melanoma.

Answer: <https://biology-forums.com/index.php?topic=498707>

Question 1086

Special senses, such as sight and sound, are detected by:

- A) motor neurons.
- B) sensory neurons.
- C) special cells that transduce stimuli into electrical signals.
- D) both cranial nerves and spinal nerves.

Answer: <https://biology-forums.com/index.php?topic=500827>

Question 1087

List the periods of prenatal development.

Answer: <https://biology-forums.com/index.php?topic=511396>

Question 1088

Which of the following is NOT a function of the liver via the hepatic portal system?

- A) erythropoiesis
- B) destruction of red blood cells
- C) detoxification reactions
- D) storage of glucose

Answer: <https://biology-forums.com/index.php?topic=501259>

Question 1089

Medial rotation of the eyeball is performed by the:

- A) inferior rectus muscle.
- B) medial rectus muscle.
- C) superior rectus muscle.
- D) inferior oblique muscle.

Answer: <https://biology-forums.com/index.php?topic=500212>

Question 1090

Bone, or osseous, tissue provides protection for our vital organs since the inorganic ground substance is:

- A) mostly water, dissolved solutes, and proteins.
- B) collagen fibers.
- C) calcium and phosphate crystals.
- D) both collagen and elastic fibers.

Answer: <https://biology-forums.com/index.php?topic=498585>

Question 1091

What stem cell begins the process of spermatogenesis?

- A) secondary spermatocyte
- B) spermatid
- C) primary spermatocyte
- D) spermatogonium

Answer: <https://biology-forums.com/index.php?topic=511200>

Question 1092

Explain how the popliteal and patellar regions differ.

Answer: <https://biology-forums.com/index.php?topic=498255>

Question 1093

What is the function of the red pulp of the spleen?

- A) filter pathogens from lymph
- B) filter pathogens from the blood
- C) house leukocytes and dendritic cells
- D) house macrophages that destroy old erythrocytes

Answer: <https://biology-forums.com/index.php?topic=501411>

Question 1094

Which neuroglial cell helps form the blood-brain barrier?

- A) astrocyte
- B) oligodendrocyte
- C) satellite cell
- D) ependymal cell

Answer: <https://biology-forums.com/index.php?topic=500408>

Question 1095

Testosterone is made by the myoid cells of the male testes.

Answer: <https://biology-forums.com/index.php?topic=511255>

Question 1096

The fastest muscle contraction would be produced by a:

- A) type I fiber.
- B) type IIx fiber.
- C) type IIb fiber.
- D) type IIc fiber.

Answer: <https://biology-forums.com/index.php?topic=500330>

Question 1097

Outline the steps to a simple stretch reflex.

Answer: <https://biology-forums.com/index.php?topic=500723>

Question 1098

What role does dopamine play in motor control?

- A) Dopamine binds receptors in the cerebral cortex to activate upper motor neurons to produce coordinated and smooth movements.
- B) Dopamine binds receptors on the caudate nucleus and putamen, inhibiting the globus pallidus. The upper motor neurons are eventually activated.
- C) Dopamine enhances the process of motor learning in the cerebellum to reduce motor error.
- D) Dopamine inhibits the substantia nigra of the basal nuclei and inhibits the upper motor neurons from initiating movement.

Answer: <https://biology-forums.com/index.php?topic=500562>

Question 1099

Explain the role of peripheral chemoreceptors in the maintenance of blood flow to tissues.

Answer: <https://biology-forums.com/index.php?topic=501285>

Question 1100

Which division of the aorta gives rise to the right and left common iliac arteries?

- A) ascending aorta
- B) aortic arch
- C) descending abdominal aorta
- D) descending thoracic aorta

Answer: <https://biology-forums.com/index.php?topic=501244>

Question 1101

Membrane-attack complexes (MAC) can lead to cell lysis through their insertion into a target cell's plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=501494>

Question 1102

Which of the following is NOT an effect of the vagus nerve on the stomach's activities?

- A) stimulation of somatostatin secretion
- B) stimulation of gastric secretion
- C) stimulation of histamine secretion
- D) stimulation of hydrogen ion release

Answer: <https://biology-forums.com/index.php?topic=501674>

Question 1103

Upon binding to a receptor to form a hormone-receptor complex, steroid hormones may cause:

- A) the formation of cAMP.
- B) the activation of adenylate cyclase.
- C) an increase in protein synthesis.
- D) the activation of protein kinases.

Answer: <https://biology-forums.com/index.php?topic=500951>

Question 1104

Which antibodies are found in colostrum?

- A) IgG
- B) IgM
- C) IgA
- D) IgD

Answer: <https://biology-forums.com/index.php?topic=511367>

Question 1105

Identify the cavity where the left lung is housed.

Answer: <https://biology-forums.com/index.php?topic=498235>

Question 1106

Relate puberty and increased testosterone and estrogen production to the relative heights of men and women.

Answer: <https://biology-forums.com/index.php?topic=498828>

Question 1107

The partial pressure gradient for oxygen in the body is much steeper than that for carbon dioxide. Explain how equal amounts of these two gases can be exchanged (in a given time interval) in the lungs and at the tissues. What law describes this phenomenon?

Answer: <https://biology-forums.com/index.php?topic=501618>

Question 1108

Microtubules are composed of protein subunits known as:

- A) keratin.
- B) actin.
- C) tubulin.
- D) myosin.

Answer: <https://biology-forums.com/index.php?topic=498433>

Question 1109

During excitation-contraction coupling, calcium ion concentration is highest in the:

- A) sarcoplasmic reticulum.
- B) cytosol of the muscle fiber.
- C) sarcolemma.
- D) terminal cisterna.

Answer: <https://biology-forums.com/index.php?topic=500314>

Question 1110

You've looked for your keys for the past ten minutes in several different places. The ability to keep track of the places you've already looked is stored in:

- A) short-term (working) memory.
- B) long-term potentiation (LTP).
- C) immediate memory.
- D) long-term memory.

Answer: <https://biology-forums.com/index.php?topic=500576>

Question 1111

Glucagon operates under:

- A) neurohormonal stimulation.
- B) humoral stimulation.
- C) neural stimulation.
- D) hormonal stimulation.

Answer: <https://biology-forums.com/index.php?topic=501009>

Question 1112

What is NOT part of the cerebrum?

- A) parietal lobe
- B) frontal lobe
- C) insula
- D) brainstem

Answer: <https://biology-forums.com/index.php?topic=500508>

Question 1113

What is required for excitation-contraction coupling?

- A) calcium ions and ATP
- B) calcium ions only
- C) ATP only
- D) neither calcium ions nor ATP

Answer: <https://biology-forums.com/index.php?topic=500313>

Question 1114

Which statement best describes red blood cells?

- A) Red blood cells have a nucleus and most organelles.
- B) Red blood cells live about 10 days.
- C) Red blood cells form antibodies to fight antigens.
- D) Red blood cells possess a protein known as hemoglobin.

Answer: <https://biology-forums.com/index.php?topic=501313>

Question 1115

When body temperature decreases below the normal range, thermoreceptors in the skin and hypothalamus detect the decrease in body temperature. The heat-promoting center of the hypothalamus is activated, which sends signals to blood vessels and skeletal muscles. In response, blood vessels in the skin constrict and skeletal muscles shiver. Determine the part of this negative feedback loop that serves as the control center.

- A) thermoreceptors
- B) blood vessels and skeletal muscles
- C) hypothalamus
- D) body temperature

Answer: <https://biology-forums.com/index.php?topic=501824>

Question 1116

In the common pathway, what factor combines with factor Va and calcium ions to form prothrombin activator?

- A) IXa
- B) VIIa
- C) XIIa
- D) Xa

Answer: <https://biology-forums.com/index.php?topic=501352>

Question 1117

What are the two subcavities of the dorsal body cavity?

- A) cranial and vertebral (spinal) cavities
- B) thoracic and abdominopelvic cavities
- C) abdominal and pelvic cavities
- D) pleural and pericardial cavities

Answer: <https://biology-forums.com/index.php?topic=498192>

Question 1118

Which enzyme catalyzes the reaction of lactose into glucose and galactose?

- A) lipase
- B) sucrase
- C) maltase
- D) lactase

Answer: <https://biology-forums.com/index.php?topic=501712>

Question 1119

The large hole in the coxal bone is the:

- A) greater sciatic notch.
- B) acetabulum.
- C) obturator foramen.
- D) ischial tuberosity.

Answer: <https://biology-forums.com/index.php?topic=498906>

Question 1120

The brainstem connects the brain and the:

- A) cerebellum.
- B) spinal cord.
- C) eyes.
- D) ventricles.

Answer: <https://biology-forums.com/index.php?topic=500500>

Question 1121

End-diastolic volume for each ventricle during rest is normally about:

- A) 25 ml.
- B) 50 ml.
- C) 70 ml.
- D) 120 ml.

Answer: <https://biology-forums.com/index.php?topic=501133>

Question 1122

Damage to the basal cells in the olfactory epithelium results in a loss of:

- A) hearing.
- B) vision.
- C) taste.
- D) smell.

Answer: <https://biology-forums.com/index.php?topic=500830>

Question 1123

What increases air turbulence to extract dust and other debris from air traveling through the nasal cavity?

- A) nasal conchae and meatuses
- B) vestibule
- C) posterior nares
- D) septal cartilage

Answer: <https://biology-forums.com/index.php?topic=501539>

Question 1124

A drug that inhibits angiotensin-converting enzyme (ACE) may lead to:

- A) increased blood volume.
- B) increased secretion of aldosterone.
- C) decreased blood pressure.
- D) increased sodium reabsorption.

Answer: <https://biology-forums.com/index.php?topic=501925>

Question 1125

What is the cause of trichomoniasis?

- A) interferon
- B) bacteria
- C) virus
- D) parasite

Answer: <https://biology-forums.com/index.php?topic=511248>

Question 1126

Which hormone decreases cardiac output by decreasing blood volume and preload?

- A) atrial natriuretic peptide
- B) aldosterone
- C) antidiuretic hormone
- D) norepinephrine

Answer: <https://biology-forums.com/index.php?topic=501155>

Question 1127

Cerumen, produced by modified apocrine glands, lines the ear canal to lubricate the tympanic membrane (eardrum) and trap incoming particles before they reach the membrane.

Answer: <https://biology-forums.com/index.php?topic=498717>

Question 1128

The reactants of an endergonic reaction contain more energy than the products.

Answer: <https://biology-forums.com/index.php?topic=498373>

Question 1129

Axons with a smaller diameter can conduct nerve impulses more quickly than axons with a larger diameter.

Answer: <https://biology-forums.com/index.php?topic=500470>

Question 1130

The speed of nerve impulse transmission through the axon of a sensory neuron will be quickest in:

- A) axons that adapt to stimuli.
- B) a large-diameter, myelinated axon.
- C) axons with a greater receptive field.
- D) a small-diameter, unmyelinated axon.

Answer: <https://biology-forums.com/index.php?topic=500664>

Question 1131

Which of the following is the strongest bond?

- A) ionic
- B) single covalent
- C) hydrogen
- D) double covalent

Answer: <https://biology-forums.com/index.php?topic=498294>

Question 1132

Where are blood vessels housed that nourish the epidermis?

- A) the reticular layer of the dermis
- B) stratum basale of the epidermis
- C) dermal papillae
- D) lamellated (Pacinian) corpuscles

Answer: <https://biology-forums.com/index.php?topic=498676>

Question 1133

Why is the inspiratory reserve volume greater than the expiratory reserve volume?

Answer: <https://biology-forums.com/index.php?topic=501617>

Question 1134

Cindy's leg muscles displayed a state of hypotonia since her arm was recently removed from a cast.

Answer: <https://biology-forums.com/index.php?topic=500378>

Question 1135

Water is most likely to dissolve a solute that is:

- A) hydrophilic.
- B) a lipid.
- C) hydrophobic.
- D) nonpolar.

Answer: <https://biology-forums.com/index.php?topic=498312>

Question 1136

Determine and describe the type of cell junction that links cells so tightly that the spaces between them are impermeable to the passage of macromolecules.

Answer: <https://biology-forums.com/index.php?topic=498612>

Question 1137

Predict the effects of hyperaldosteronism (excess aldosterone production) on potassium ion balance.

Answer: <https://biology-forums.com/index.php?topic=511178>

Question 1138

While studying with your lab partner, he says that synovial joints are functionally classified as synarthroses. Determine and explain how his statement is incorrect, and then correct his statement.

Answer: <https://biology-forums.com/index.php?topic=500175>

Question 1139

List the six types of connective tissue proper.

Answer: <https://biology-forums.com/index.php?topic=498617>

Question 1140

The strongest type of chemical bond is a covalent bond because electrons are shared between two or more nonmetals.

Answer: <https://biology-forums.com/index.php?topic=498372>

Question 1141

Describe the three functions of synovial fluid in a synovial joint.

Answer: <https://biology-forums.com/index.php?topic=500169>

Question 1142

Which letter represents the foliate taste buds?

- A) A
- B) B
- C) C

Answer: <https://biology-forums.com/index.php?topic=500835>

Question 1143

What does the ectoderm form?

- A) neural plate and neural tube
- B) gonads and kidneys
- C) internal epithelial layer of the urinary system
- D) internal epithelial layer of the digestive system

Answer: <https://biology-forums.com/index.php?topic=511327>

Question 1144

Fluid found in lymphatic vessels is known as:

- A) intracellular fluid.
- B) interstitial fluid.
- C) plasma.
- D) lymph.

Answer: <https://biology-forums.com/index.php?topic=501394>

Question 1145

Predict the direction of water movement if a cell is in hypertonic interstitial fluid.

Answer: <https://biology-forums.com/index.php?topic=511163>

Question 1146

What epithelium forms the alveolus?

- A) simple columnar epithelium
- B) simple squamous epithelium
- C) stratified squamous epithelium
- D) pseudostratified ciliated columnar epithelium

Answer: <https://biology-forums.com/index.php?topic=501557>

Question 1147

A patient has cancer of the lymphoid cell line. Predict the effects on leukopoiesis.

Answer: <https://biology-forums.com/index.php?topic=501381>

Question 1148

Stratified epithelium does not line areas where transcellular transport is required.

Answer: <https://biology-forums.com/index.php?topic=498630>

Question 1149

What do ligaments connect together?

- A) bones
- B) muscles

- C) bone and muscle
- D) cartilage and bone

Answer: <https://biology-forums.com/index.php?topic=498989>

Question 1150

Under anaerobic conditions, what happens to pyruvate?

- A) Pyruvate undergoes decarboxylation.
- B) Pyruvate is oxidized in the mitochondrion.
- C) Pyruvate enters the citric acid cycle.
- D) Pyruvate is reduced to lactate.

Answer: <https://biology-forums.com/index.php?topic=501774>

Question 1151

What is the main role of macrophages in the lymphatic tissues?

- A) form structures of neurons
- B) phagocytosis
- C) form collagen fibers
- D) structure and support

Answer: <https://biology-forums.com/index.php?topic=501403>

Question 1152

Explain how amino acid catabolism is related to the production of ammonia and urea.

Answer: <https://biology-forums.com/index.php?topic=501866>

Question 1153

An important buffer system in the body is:

- A) HCl.
- B) NaOH.
- C) H₂O.
- D) HCO₃⁻.

Answer: <https://biology-forums.com/index.php?topic=498326>

Question 1154

The central region of the A band that lacks thin filaments is the:

- A) I band.
- B) Z disc.
- C) H zone.
- D) sarcomere.

Answer: <https://biology-forums.com/index.php?topic=500298>

Question 1155

List the five major classes of antibodies.

Answer: <https://biology-forums.com/index.php?topic=501519>

Question 1156

Explain how smoking impairs the protective features of the epithelium of the respiratory tract.

Answer: <https://biology-forums.com/index.php?topic=501609>

Question 1157

What gas exchange problems do you expect to see when surface area is lost due to emphysema?

- A) hyperventilation
- B) eupnea
- C) hypocapnia
- D) both hypercapnia and hypoxemia

Answer: <https://biology-forums.com/index.php?topic=501582>

Question 1158

When you bend your head, gravity pulls on the otolithic membrane, bending the stereocilia either toward or away from the kinocilium.

Answer: <https://biology-forums.com/index.php?topic=500914>

Question 1159

What is most abundant intracellular cation?

- A) bicarbonate ion
- B) potassium ion
- C) chlorine ion
- D) sodium ion

Answer: <https://biology-forums.com/index.php?topic=502024>

Question 1160

Endocrine cells that increase hormone secretion in response to other hormones are controlled by:

- A) positive stimuli.
- B) humoral stimuli.
- C) hormonal stimuli.
- D) neural stimuli.

Answer: <https://biology-forums.com/index.php?topic=500953>

Question 1161

Neurons on the superior olivary nucleus compare information from both ears to determine the loudness of sound.

Answer: <https://biology-forums.com/index.php?topic=500913>

Question 1162

In what dura mater fold is the superior sagittal sinus located?

- A) tentorium cerebelli
- B) falx cerebri
- C) tentorium cerebri
- D) falx cerebelli

Answer: <https://biology-forums.com/index.php?topic=500532>

Question 1163

What is NOT a bone to which the sternocleidomastoid muscle is attached?

- A) mandible
- B) clavicle
- C) sternum
- D) temporal bone

Answer: <https://biology-forums.com/index.php?topic=500206>

Question 1164

Why are collagen fibers a critical component of bone?

- A) Collagen fibers act as "glue" to bind components together.
- B) Collagen fibers help bone resist torsion.
- C) Collagen fibers help the bone resist compression.
- D) Collagen fibers help trap water in the ECM.

Answer: <https://biology-forums.com/index.php?topic=498757>

Question 1165

Calcium ions have important functions in the body such as forming an integral part of the ATP molecule.

Answer: <https://biology-forums.com/index.php?topic=511155>

Question 1166

How would the removal of hydroxyapatite crystals from bone matrix affect the physical properties of a bone?

- A) The bone would be less flexible.
- B) The bone would be stronger.
- C) The bone would be more flexible.
- D) The bone would be less compressible.

Answer: <https://biology-forums.com/index.php?topic=498758>

Question 1167

The entry of acetylcholine into a muscle cell through ligand-gated ion channels depolarizes the sarcolemma locally.

Answer: <https://biology-forums.com/index.php?topic=500372>

Question 1168

Describe the steps of sensory transduction when a touch receptor in the skin is activated.

Answer: <https://biology-forums.com/index.php?topic=500716>

Question 1169

The type of burn that may require a skin graft is a:

- A) first-degree burn.
- B) second-degree burn.
- C) third-degree burn.
- D) partial-thickness burn.

Answer: <https://biology-forums.com/index.php?topic=498705>

Question 1170

Gastrin increases hydrogen ion secretion by the stomach.

Answer: <https://biology-forums.com/index.php?topic=501726>

Question 1171

What is the normal value for the glomerular filtration rate (GFR) in mL/min?

- A) 75
- B) 125
- C) 275
- D) 500

Answer: <https://biology-forums.com/index.php?topic=501909>

Question 1172

At the arteriolar end of the capillary, which pressure is the greatest?

- A) colloid osmotic pressure
- B) capillary hydrostatic pressure
- C) interstitial fluid osmotic pressure
- D) oncotic pressure

Answer: <https://biology-forums.com/index.php?topic=501235>

Question 1173

If the receptor site for a neurotransmitter were completely blocked:

- A) synaptic transmission would fail.
- B) a weaker action potential would result.
- C) neurotransmitter release would stop.
- D) the presynaptic neuron would release a different neurotransmitter.

Answer: <https://biology-forums.com/index.php?topic=500444>

Question 1174

Olfaction is the sense of:

- A) taste.
- B) smell.
- C) balance.
- D) hearing.

Answer: <https://biology-forums.com/index.php?topic=500828>

Question 1175

What is the measurement of the osmotic pressure gradient between two fluid compartments?

- A) tonicity
- B) alkalinity
- C) pH scale
- D) osmolarity

Answer: <https://biology-forums.com/index.php?topic=502002>

Question 1176

Sensible water loss includes water lost through feces and urine while insensible water loss includes water lost through sweating and evaporation.

Answer: <https://biology-forums.com/index.php?topic=511150>

Question 1177

If the dorsal respiratory group of neurons (DRG) was destroyed:

- A) tidal volumes would diminish.
- B) alveolar ventilation would increase.
- C) a person would stop breathing.
- D) pulmonary ventilation would increase markedly.

Answer: <https://biology-forums.com/index.php?topic=501596>

Question 1178

What type of joint is characterized by articulating bones with a deeper complementary fit, one with a convex surface and the other with a concave surface?

- A) saddle joint
- B) pivot joint
- C) ball-and-socket joint
- D) hinge joint

Answer: <https://biology-forums.com/index.php?topic=499014>

Question 1179

Cells that generate, conduct, and receive electrical messages are:

- A) neuroglial cells.
- B) dendrites.
- C) neurons.
- D) soma.

Answer: <https://biology-forums.com/index.php?topic=498595>

Question 1180

Blood pH exists within a narrow range of values. Describe the role of buffer systems in achieving blood pH homeostasis.

Answer: <https://biology-forums.com/index.php?topic=498388>

Question 1181

What portion of the brainstem blends with the spinal cord after passing through the foramen magnum?

- A) medulla oblongata
- B) hypothalamus
- C) midbrain
- D) pons

Answer: <https://biology-forums.com/index.php?topic=500527>

Question 1182

What makes estrogen and progesterone after the fourth month of pregnancy to maintain the uterine lining?

- A) ovaries
- B) placenta
- C) corpus luteum
- D) anterior pituitary

Answer: <https://biology-forums.com/index.php?topic=511345>

Question 1183

Discuss why the C-shaped rings of cartilage in the submucosa of the trachea are appropriate to their function.

Answer: <https://biology-forums.com/index.php?topic=501610>

Question 1184

In what order does air inhaled through the nose travel, from superior to inferior?

- A) oropharynx, nasopharynx, laryngopharynx
- B) nasopharynx, oropharynx, laryngopharynx
- C) laryngopharynx, oropharynx, nasopharynx
- D) nasopharynx, laryngopharynx, oropharynx

Answer: <https://biology-forums.com/index.php?topic=501543>

Question 1185

Why does the medullary cavity develop during endochondral ossification? Explain.

Answer: <https://biology-forums.com/index.php?topic=498825>

Question 1186

What is the action of flexor carpi ulnaris?

- A) flex the little finger
- B) flex the index finger
- C) flex the wrist
- D) flex the thumb

Answer: <https://biology-forums.com/index.php?topic=500232>

Question 1187

Exercise often makes the skin flush red, a condition known as:

- A) jaundice.
- B) erythema.
- C) pallor.
- D) cyanosis.

Answer: <https://biology-forums.com/index.php?topic=498687>

Question 1188

Where are receptors for acetylcholine located?

- A) axon terminal
- B) motor end plate
- C) triad
- D) sarcomere

Answer: <https://biology-forums.com/index.php?topic=500309>

Question 1189

What unit of light stimulates photoreceptor cells in the retina?

- A) refractive index
- B) gamma ray
- C) photon
- D) glutamate

Answer: <https://biology-forums.com/index.php?topic=500857>

Question 1190

Estrogens are critical for:

- A) increased erythrocyte production.
- B) adipose tissue deposits in the breasts, hips, and thighs.
- C) increased skeletal muscle mass.
- D) deepening of the voice.

Answer: <https://biology-forums.com/index.php?topic=511238>

Question 1191

The outward force that blood exerts on the walls of blood vessels is:

- A) cardiac output.
- B) blood pressure.
- C) blood flow.
- D) resistance.

Answer: <https://biology-forums.com/index.php?topic=501201>

Question 1192

Classify the shoulder joint.

- A) uniaxial joint
- B) biaxial joint
- C) multiaxial (triaxial) joint
- D) nonaxial joint

Answer: <https://biology-forums.com/index.php?topic=499009>

Question 1193

Summarize the four steps of bone repair.

Answer: <https://biology-forums.com/index.php?topic=498831>

Question 1194

Osteoblasts are to bone deposition as:

- A) osteoclasts are to hematopoiesis.
- B) osteocytes are to bone formation.
- C) osteoclasts are to bone resorption.
- D) osteocytes are to fat storage.

Answer: <https://biology-forums.com/index.php?topic=498762>

Question 1195

Carbon dioxide is formed during the electron transport chain (ETC).

Answer: <https://biology-forums.com/index.php?topic=501842>

Question 1196

Which of the following best describes a cell's response to being placed into an extracellular solution that is hypertonic to the cytosol?

- A) lysis
- B) crenation
- C) swelling
- D) no net gain or loss of water

Answer: <https://biology-forums.com/index.php?topic=498412>

Question 1197

Predict the possible genotypes of offspring of a couple who both are heterozygous for free earlobes. The trait for free earlobes are carried on the dominant allele while the trait for attached earlobes is carried on the recessive allele.

Answer: <https://biology-forums.com/index.php?topic=511418>

Question 1198

In which organ is chyme mixed with pancreatic juice and bile?

- A) stomach
- B) duodenum
- C) cecum
- D) esophagus

Answer: <https://biology-forums.com/index.php?topic=501718>

Question 1199

The cytosol and intracellular fluid (ICF) both refer to the fluid portion of the cytoplasm.

Answer: <https://biology-forums.com/index.php?topic=498488>

Question 1200

Atrial natriuretic peptide (ANP) alters peripheral resistance by causing vasodilation. As a result, there is a mild decrease in peripheral resistance and blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501269>

Question 1201

What two values are needed in order to calculate cardiac output (CO) for a ventricle?

- A) heart rate (HR) and end-diastolic volume (EDV)
- B) stroke volume (SV) and heart rate (HR)
- C) stroke volume (SV) and blood pressure (BP)
- D) end-diastolic volume (EDV) and end-systolic volume (ESV)

Answer: <https://biology-forums.com/index.php?topic=501145>

Question 1202

Bill first had the influenza vaccine in October. He experienced a headache, achiness, fatigue, and a fever. When he came into contact with the

influenza virus a few months later, he hardly had any symptoms at all. Explain these two different immune responses seen with each exposure to the virus.

Answer: <https://biology-forums.com/index.php?topic=501531>

Question 1203

Nina is researching hormones that can stimulate and inhibit the release of growth hormone from the anterior pituitary. Predict the type of stimulation that regulates the secretion of growth hormone.

Answer: <https://biology-forums.com/index.php?topic=501042>

Question 1204

Which of the following ducts travels through the prostate gland?

- A) epididymis
- B) ejaculatory duct
- C) ductus deferens
- D) spongy urethra

Answer: <https://biology-forums.com/index.php?topic=511191>

Question 1205

Air travels from the respiratory bronchioles to the:

- A) terminal bronchioles.
- B) tertiary bronchi.
- C) alveolar ducts.
- D) alveolar sacs.

Answer: <https://biology-forums.com/index.php?topic=501552>

Question 1206

After fertilization, a zygote rapidly divides to produce small, genetically identical cells known as:

- A) blastomeres.
- B) trophoblasts.
- C) centromeres.
- D) pronuclei.

Answer: <https://biology-forums.com/index.php?topic=511306>

Question 1207

What is housed in the pyramidal tracts of the medulla oblongata?

- A) upper motor neurons of the corticospinal tract
- B) upper sensory neurons of the corticospinal tract
- C) lower motor neurons of the corticospinal tract
- D) lower sensory neurons of the corticospinal tract

Answer: <https://biology-forums.com/index.php?topic=500529>

Question 1208

Syndesmosis is to ligament as symphysis is to:

- A) fibrocartilage.
- B) suture.
- C) gomphosis.
- D) dense regular collagenous connective tissue.

Answer: <https://biology-forums.com/index.php?topic=498974>

Question 1209

What two factors determine the pressure gradient that drives circulation?

- A) cardiac output and peripheral resistance
- B) blood vessel radius and blood vessel length
- C) diastolic pressure and systolic pressure
- D) heart rate and stroke volume

Answer: <https://biology-forums.com/index.php?topic=501206>

Question 1210

Thin, broad bones should be classified as:

- A) short bones.
- B) long bones.
- C) flat bones.
- D) irregular bones.

Answer: <https://biology-forums.com/index.php?topic=498745>

Question 1211

A neuron that receives neurotransmitters from another neuron is called:

- A) the presynaptic neuron.
- B) the postsynaptic neuron.
- C) an oligodendrocyte.
- D) a Schwann cell.

Answer: <https://biology-forums.com/index.php?topic=500440>

Question 1212

Explain how rubbing your eyes with dirty hands can lead to an infection in the nasal cavity.

Answer: <https://biology-forums.com/index.php?topic=500935>

Question 1213

Assuming a 28-day ovarian cycle, on what day should ovulation occur?

- A) day 0
- B) day 14
- C) day 21
- D) day 28

Answer: <https://biology-forums.com/index.php?topic=511233>

Question 1214

Glucose catabolism refers to the reactions that involve the breakdown of the monosaccharide glucose and the use of the chemical energy in its bonds to drive ATP synthesis.

Answer: <https://biology-forums.com/index.php?topic=501841>

Question 1215

Which of the following releases human chorionic gonadotropin (hCG)?

- A) cytotrophoblast
- B) inner cell mass
- C) blastocyst
- D) syncytiotrophoblast

Answer: <https://biology-forums.com/index.php?topic=511309>

Question 1216

Which of the following is NOT part of the female's external genitalia?

- A) labia minora
- B) clitoris
- C) vagina
- D) mons pubis

Answer: <https://biology-forums.com/index.php?topic=511225>

Question 1217

Which of the following fluids has the greatest concentration of potassium ions?

- A) interstitial fluid
- B) plasma
- C) extracellular fluid (ECF)
- D) cytosol

Answer: <https://biology-forums.com/index.php?topic=502000>

Question 1218

IgM is the first antibody secreted by plasma cells when the body is invaded by a pathogen.

Answer: <https://biology-forums.com/index.php?topic=501500>

Question 1219

Differentiate among atmospheric pressure, intrapulmonary pressure and intrapleural pressure.

Answer: <https://biology-forums.com/index.php?topic=501615>

Question 1220

Which of the following is linked with many cases of cervical cancer?

- A) chlamydia
- B) trichomoniasis
- C) gonorrhea
- D) human papillomavirus (HPV)

Answer: <https://biology-forums.com/index.php?topic=511250>

Question 1221

Explain the role of the ethmoid bone in forming the structure of the nasal cavity.

Answer: <https://biology-forums.com/index.php?topic=498939>

Question 1222

Which organ system includes blood vessels and the heart?

- A) cardiovascular system
- B) endocrine system
- C) respiratory system
- D) lymphatic system

Answer: <https://biology-forums.com/index.php?topic=498174>

Question 1223

Which learner thrives in an environment with a practical-based laboratory or hands-on activities?

- A) visual/verbal
- B) tactile/kinesthetic
- C) visual/nonverbal
- D) auditory/verbal

Answer: <https://biology-forums.com/index.php?topic=498158>

Question 1224

Contractility is the ability of a muscle to shorten.

Answer: <https://biology-forums.com/index.php?topic=500363>

Question 1225

Which region of the abdominopelvic cavity lies between the right and left lumbar regions?

- A) hypogastric region
- B) right lumbar region
- C) epigastric region
- D) umbilical region

Answer: <https://biology-forums.com/index.php?topic=498199>

Question 1226

Which directional term indicates the front side of the body?

- A) medial
- B) anterior (ventral)
- C) posterior (dorsal)
- D) superior (cranial)

Answer: <https://biology-forums.com/index.php?topic=498180>

Question 1227

Which muscle works as an antagonist to orbicularis oculi?

- A) risorius
- B) zygomaticus minor
- C) levator palpebrae superioris
- D) corrugator supercilii

Answer: <https://biology-forums.com/index.php?topic=500201>

Question 1228

Jim wants to tone his abdomen and create "six-pack abs." What exercise do you recommend for him? What muscle will he be exercising?

Answer: <https://biology-forums.com/index.php?topic=500275>

Question 1229

Cherise is lactose-intolerant because she produces insufficient amounts of an enzyme called:

- A) sucrase.
- B) galactose.
- C) maltase.
- D) lactase.

Answer: <https://biology-forums.com/index.php?topic=501713>

Question 1230

Which of the following muscles is named using a directional term?

- A) orbicularis oris
- B) vastus lateralis
- C) gastrocnemius
- D) adductor longus

Answer: <https://biology-forums.com/index.php?topic=500183>

Question 1231

Activated helper T (TH) cells or cytotoxic T (TC) cell clones differentiate into:

- A) plasma cells and memory B cells.
- B) memory B cells and memory T cells.
- C) effector cells and memory T cells.
- D) effector cells and plasma cells.

Answer: <https://biology-forums.com/index.php?topic=501437>

Question 1232

Place the following steps of nerve impulses in the olfaction pathway in order.

1. primary olfactory cortex in the temporal lobe
2. olfactory nerve
3. olfactory neurons
4. olfactory bulb

- A) 3, 2, 4, 1
- B) 2, 3, 4, 1
- C) 3, 4, 2, 1
- D) 2, 4, 3, 1

Answer: <https://biology-forums.com/index.php?topic=500833>

Question 1233

A test known as two-point discrimination threshold measures:

- A) the type of mechanoreceptor being stimulated.
- B) the amount of pressure we can sustain before feeling pain.
- C) the type of sensory neuron serving a region of skin.
- D) the relative size of receptive fields.

Answer: <https://biology-forums.com/index.php?topic=500666>

Question 1234

The monomer of the carbohydrates is:

- A) fatty acid.
- B) amino acid.
- C) nucleotide.
- D) monosaccharide.

Answer: <https://biology-forums.com/index.php?topic=498332>

Question 1235

The majority of the cerebral cortex is:

- A) cerebellum.
- B) neocortex.
- C) fiber tracts.
- D) white matter.

Answer: <https://biology-forums.com/index.php?topic=500509>

Question 1236

When muscle fibers are stimulated so frequently they do not have an opportunity to relax, they are experiencing:

- A) wave summation.
- B) unfused or incomplete tetanus.
- C) fused or complete tetanus.
- D) twitch.

Answer: <https://biology-forums.com/index.php?topic=500328>

Question 1237

List the cranial nerves and their corresponding Roman numerals that are generally considered sensory nerves.

Answer: <https://biology-forums.com/index.php?topic=500705>

Question 1238

If the upper motor neuron originating in the right primary motor cortex is damaged prior to arriving at the medullary pyramids, predict the impact on motor control.

Answer: <https://biology-forums.com/index.php?topic=500616>

Question 1239

When dry or sunburned, we often notice our skin peels in sheets or layers. Discuss the type of cell junction responsible for creating this feature of epithelial tissue.

Answer: <https://biology-forums.com/index.php?topic=498641>

Question 1240

Where is the origin of the frontalis muscle?

- A) mandible
- B) frontal bone
- C) occipital bone
- D) epicranial aponeurosis

Answer: <https://biology-forums.com/index.php?topic=500198>

Question 1241

Kegel exercises can help a female strengthen muscles of the pelvic floor. Why would a female perform these exercises? What muscle of the pelvic floor is targeted by these exercises?

Answer: <https://biology-forums.com/index.php?topic=500283>

Question 1242

Describe how a radioisotope achieves a more stable form.

Answer: <https://biology-forums.com/index.php?topic=498351>

Question 1243

Where does fertilization usually occur?

- A) infundibulum of the uterine tube
- B) vagina
- C) ampulla of the uterine tube
- D) uterus

Answer: <https://biology-forums.com/index.php?topic=511219>

Question 1244

The total solute concentration of a red blood cell is about 2%. Sucrose cannot pass through a red blood cell's plasma membrane, but water and urea can. Which of the following solutions will cause a red blood cell to shrink?

- A) a hypotonic sucrose solution
- B) a hypertonic sucrose solution

C) a hypotonic urea solution

D) a hypertonic urea solution

Answer: <https://biology-forums.com/index.php?topic=498414>

Question 1245

List and describe the types of contractile and regulatory proteins found in a thin filament.

Answer: <https://biology-forums.com/index.php?topic=500346>

Question 1246

Sensory transduction occurs in:

A) upper motor neurons.

B) PNS sensory neurons.

C) CNS interneurons.

D) lower motor neurons.

Answer: <https://biology-forums.com/index.php?topic=500654>

Question 1247

Brenda's blood test that reveals high levels of thyroid-stimulating hormone (TSH) but low levels of triiodothyronine, or T3, and thyroxine, or T4. Determine if these results are normal or if they reveal a homeostatic imbalance. Explain to support your answer.

Answer: <https://biology-forums.com/index.php?topic=501049>

Question 1248

Atrial natriuretic peptide (ANP) promotes:

A) decreased urination.

B) water retention.

C) increased blood pressure.

D) vasodilation.

Answer: <https://biology-forums.com/index.php?topic=501023>

Question 1249

Explain how gross anatomy and microscopic anatomy differ.

Answer: <https://biology-forums.com/index.php?topic=498241>

Question 1250

When oxygen concentrations are low, hemoglobin releases oxygen to become carboxyhemoglobin.

Answer: <https://biology-forums.com/index.php?topic=501363>

Question 1251

What hormone is made by the parafollicular cells of the thyroid gland?

A) triiodothyronine (T3)

B) thyroxine (T4)

C) calcitonin

D) parathyroid hormone (PTH)

Answer: <https://biology-forums.com/index.php?topic=500976>

Question 1252

When climbing stairs, which muscles plantar flex your foot?

A) gluteus maximus and hamstrings

B) rectus femoris and sartorius

C) gastrocnemius and soleus

D) tibialis anterior and extensor digitorum longus

Answer: <https://biology-forums.com/index.php?topic=500248>

Question 1253

The cisterna chyli collects lymph from the intestinal trunk and the lumbar trunk.

Answer: <https://biology-forums.com/index.php?topic=501488>

Question 1254

The following has been determined from an arterial blood gas (ABG) sample: an elevated blood pH and an elevated bicarbonate ion level. Determine the acid-base imbalance.

- A) respiratory acidosis
- B) respiratory alkalosis
- C) metabolic acidosis
- D) metabolic alkalosis

Answer: <https://biology-forums.com/index.php?topic=511143>

Question 1255

Discuss the primary and secondary curvatures of the vertebral column.

Answer: <https://biology-forums.com/index.php?topic=498943>

Question 1256

Where is cardiac muscle tissue located?

- A) heart
- B) tendons and ligaments
- C) attached to bones
- D) ducts of certain glands

Answer: <https://biology-forums.com/index.php?topic=498593>

Question 1257

The ECM of blood is known as:

- A) plasma.
- B) lacunae.
- C) bone marrow.
- D) osteoid.

Answer: <https://biology-forums.com/index.php?topic=498589>

Question 1258

Which of the following may be prevented with a vaccine?

- A) trichomoniasis
- B) human papillomavirus (HPV)
- C) syphilis
- D) genital herpes

Answer: <https://biology-forums.com/index.php?topic=511252>

Question 1259

Water loss from the body that we do not notice is known as:

- A) nonsense water loss.
- B) insensible water loss.
- C) sensible water loss.
- D) obligatory water loss.

Answer: <https://biology-forums.com/index.php?topic=502007>

Question 1260

Which two arteries arise from the right coronary artery?

- A) the right anterior interventricular artery and the left posterior interventricular artery
- B) the right anterior interventricular artery and the right circumflex artery
- C) the left marginal artery and the right circumflex artery
- D) the right marginal artery and the right posterior interventricular artery

Answer: <https://biology-forums.com/index.php?topic=501086>

Question 1261

Which modification of the small intestine creates a brush border appearance upon microscopic examination?

- A) microvilli
- B) villi
- C) circular folds
- D) plicae circulares

Answer: <https://biology-forums.com/index.php?topic=501685>

Question 1262

Assess the following functional classes of synovial joints and rank them from least number of axes to most number of axes: biaxial, multiaxial (triaxial), nonaxial, and uniaxial.

Answer: <https://biology-forums.com/index.php?topic=500170>

Question 1263

What are the maternal and fetal contributions to the placenta?

Answer: <https://biology-forums.com/index.php?topic=511404>

Question 1264

Is hydrolysis an anabolic or a catabolic reaction? Explain.

Answer: <https://biology-forums.com/index.php?topic=498364>

Question 1265

Neurotransmitters that bind ionotropic receptors control:

- A) the formation of a second messenger inside the postsynaptic neuron.
- B) the movement of ions into or out of the postsynaptic neuron.
- C) the activation of G-proteins inside the postsynaptic neuron.
- D) some metabolic process inside the postsynaptic neuron.

Answer: <https://biology-forums.com/index.php?topic=500453>

Question 1266

What is edema?

- A) net filtration pressure
- B) absorption
- C) dehydration
- D) swelling

Answer: <https://biology-forums.com/index.php?topic=501241>

Question 1267

What is the correct order of the phases in the M phase of the cell cycle?

- A) prophase, anaphase, metaphase, telophase
- B) anaphase, telophase, prophase, metaphase
- C) metaphase, prophase, anaphase, telophase
- D) prophase, metaphase, anaphase, telophase

Answer: <https://biology-forums.com/index.php?topic=498461>

Question 1268

A female's pelvis typically has:

- A) a narrow greater pelvis.
- B) a narrow pubic arch.
- C) laterally-pointing ischial tuberosities.
- D) a heart-shaped pelvic inlet.

Answer: <https://biology-forums.com/index.php?topic=498909>

Question 1269

Explain the role of acetylcholine in the excitation phase of excitation-contraction coupling.

Answer: <https://biology-forums.com/index.php?topic=500353>

Question 1270

Which statement best describes the all-or-none principle?

- A) Local, or graded, potentials will always become action potentials.
- B) All voltage-gated sodium channels will open or none will open.
- C) All neurons conduct an action potential together, or none do.
- D) An action potential happens completely, or it doesn't happen at all.

Answer: <https://biology-forums.com/index.php?topic=500424>

Question 1271

Describe the steps of the renin-angiotensin-aldosterone system (RAAS) resulting in the release of aldosterone. What is the function of this system?
Answer: <https://biology-forums.com/index.php?topic=501961>

Question 1272

What is found between the visceral pericardium and the parietal pericardium?

- A) the heart
- B) pericardial fluid
- C) fibrous pericardium
- D) the lungs

Answer: <https://biology-forums.com/index.php?topic=501082>

Question 1273

Discuss the function of ductus venosus in a fetus.

Answer: <https://biology-forums.com/index.php?topic=511415>

Question 1274

Both cilia and flagella are constructed of a ring of nine pairs of microtubules surrounding two central microtubules.

Answer: <https://biology-forums.com/index.php?topic=498493>

Question 1275

Daniel was in a skiing accident and bruised the spinocerebellar tracts of his spinal cord. What kind of information do these tracts carry? Explain their function.

Answer: <https://biology-forums.com/index.php?topic=500618>

Question 1276

Which of the following is NOT a cardinal sign of inflammation?

- A) swelling (edema)
- B) cold
- C) redness
- D) pain

Answer: <https://biology-forums.com/index.php?topic=501426>

Question 1277

What is NOT a primary target tissue of cortisol?

- A) liver tissue
- B) muscle tissue
- C) adipose tissue
- D) nervous tissue

Answer: <https://biology-forums.com/index.php?topic=500997>

Question 1278

A glomerulus is:

- A) attached to the collecting duct.
- B) a set of capillaries within the renal corpuscle.
- C) the source of erythropoietin.
- D) a hairpin loop segment of the renal tubule.

Answer: <https://biology-forums.com/index.php?topic=501889>

Question 1279

Your colleague sees a pelvic radiograph you have just taken of a patient and comments that your patient must have been a female. Provide three or more characteristics of the female pelvis to support how your colleague recognized the sex of your patient from her radiograph.

Answer: <https://biology-forums.com/index.php?topic=498958>

Question 1280

Trace the pathway of sperm from the seminiferous tubules to the external urethral orifice of the penis.

Answer: <https://biology-forums.com/index.php?topic=511270>

Question 1281

Explain the meaning of the muscle name extensor carpi ulnaris.

Answer: <https://biology-forums.com/index.php?topic=500264>

Question 1282

The portion of a tooth that is visible above the gum line is known as the:

- A) crown.
- B) pulp.
- C) root.
- D) cementum.

Answer: <https://biology-forums.com/index.php?topic=501655>

Question 1283

Summarize oxidation-reduction reactions.

Answer: <https://biology-forums.com/index.php?topic=501857>

Question 1284

Lymph capillaries form a two-way system that moves lymph to and from the heart.

Answer: <https://biology-forums.com/index.php?topic=501489>

Question 1285

Connective tissues proper (or general connective tissues) produce collagen fibers using cells known as:

- A) adipocytes.
- B) fibroblasts.
- C) mast cells.
- D) phagocytes.

Answer: <https://biology-forums.com/index.php?topic=498575>

Question 1286

The porcupinefish produces a toxin that binds voltage-gated sodium channels. Determine the effect of the toxin on nerve function.

Answer: <https://biology-forums.com/index.php?topic=500483>

Question 1287

What type of bone growth do you think a 40-year-old male experiences?

- A) endochondral ossification
- B) longitudinal growth
- C) appositional growth
- D) lengthwise growth

Answer: <https://biology-forums.com/index.php?topic=498776>

Question 1288

During an erection, blood from the testicular arteries fills the vascular spaces of the corpus spongiosum of the penis.

Answer: <https://biology-forums.com/index.php?topic=511256>

Question 1289

Renal clearance is defined as:

- A) the percent of blood plasma that passes through the filtration membrane.
- B) the amount of filtrate formed by both kidneys in one minute.
- C) the amount of filtrate that is reabsorbed during one day.
- D) the rate at which the kidneys remove a substance from the blood.

Answer: <https://biology-forums.com/index.php?topic=501943>

Question 1290

Mucosa-associated lymphatic tissues (MALT) include the:

- A) spleen.
- B) tonsils.
- C) kidneys.

D) liver.

Answer: <https://biology-forums.com/index.php?topic=501404>

Question 1291

Olfactory receptors depolarize in response to an odorant, turning a stimulus into an electrical signal. This conversion is known as:

- A) sensory transduction.
- B) repolarization.
- C) propagation.
- D) adaptation.

Answer: <https://biology-forums.com/index.php?topic=500653>

Question 1292

Keratinized, dead cells are associated with:

- A) simple squamous epithelium.
- B) stratified squamous epithelium.
- C) simple columnar epithelium.
- D) pseudostratified columnar epithelium.

Answer: <https://biology-forums.com/index.php?topic=498565>

Question 1293

Discuss the function of the countercurrent mechanism and its role in the production of concentrated urine.

Answer: <https://biology-forums.com/index.php?topic=501989>

Question 1294

What do pacemaker cell action potentials lack?

- A) plateau phase
- B) depolarization
- C) repolarization
- D) threshold

Answer: <https://biology-forums.com/index.php?topic=501113>

Question 1295

Where do T lymphocytes mature?

- A) thymus gland
- B) tonsils
- C) thyroid gland
- D) throat

Answer: <https://biology-forums.com/index.php?topic=501337>

Question 1296

Discuss the difference between ossification and calcification.

Answer: <https://biology-forums.com/index.php?topic=498833>

Question 1297

Which area on the graph shows when the neuron is in the refractory period?

- A) 1
- B) 2
- C) 3
- D) 4

Answer: <https://biology-forums.com/index.php?topic=500431>

Question 1298

Elongation of the polypeptide continues as long as a new tRNA molecule situates in the:

- A) A site of the ribosome.
- B) P site of the ribosome.
- C) M site of the ribosome.
- D) E site of the ribosome.

Answer: <https://biology-forums.com/index.php?topic=498455>

Question 1299

Which of the following triggers hyperventilation?

- A) high partial pressure of oxygen in arterial blood.
- B) low partial pressure of carbon dioxide in arterial blood.
- C) low concentration of hydrogen ions in arterial blood.
- D) high partial pressure of carbon dioxide in arterial blood.

Answer: <https://biology-forums.com/index.php?topic=501601>

Question 1300

The loss of potassium ions from the cell during the repolarization stage restores a membrane potential of -85 mV.

Answer: <https://biology-forums.com/index.php?topic=500371>

Question 1301

Geri has pain behind her ear lobe and was diagnosed with mastoiditis. Which bone is affected?

- A) temporal bone
- B) frontal bone
- C) mandible
- D) occipital bone

Answer: <https://biology-forums.com/index.php?topic=498869>

Question 1302

What are the inward extensions of the sarcolemma into the muscle cell called? What function do these extensions serve?

Answer: <https://biology-forums.com/index.php?topic=500343>

Question 1303

Cindy had liposuction to remove adipose tissue years ago. However, she has since gained back nearly all the weight lost through the procedure. She does not understand why she gained weight since she learned that adipocytes lack the ability to divide in adults. Speculate on a reason why she gained weight.

Answer: <https://biology-forums.com/index.php?topic=498643>

Question 1304

In humans, from which extraembryonic membrane will the first blood cells arise?

- A) yolk sac
- B) allantois
- C) chorion
- D) amnion

Answer: <https://biology-forums.com/index.php?topic=511311>

Question 1305

Predict the effect of hypertonic fluid on a cell.

- A) Hypertonic fluids cause no water movement into or out of the cell.
- B) Hypertonic fluids cause water to move out of the cytosol and the cell shrinks.
- C) Hypertonic fluids cause water to simultaneously be pulled into, and then pushed out of a cell.
- D) Hypertonic fluids cause water to be pulled into the cytosol and the cell swells.

Answer: <https://biology-forums.com/index.php?topic=502003>

Question 1306

Compared to the male urethra, the female urethra:

- A) has no external urethral sphincter.
- B) consists of the prostatic, membranous, and spongy regions.
- C) is shorter.
- D) transports both urine and semen.

Answer: <https://biology-forums.com/index.php?topic=501948>

Question 1307

When studying, you should actively read the textbook by taking notes and making diagrams.

Answer: <https://biology-forums.com/index.php?topic=498218>

Question 1308

A serous membrane contains a superficial layer of epithelial tissue and a deeper layer of connective tissue. Thus, serous membranes are classified as:

- A) tissues.
- B) avascular.
- C) organs.
- D) amitotic.

Answer: <https://biology-forums.com/index.php?topic=498599>

Question 1309

Diploë refers to spongy bone in flat bones.

Answer: <https://biology-forums.com/index.php?topic=498807>

Question 1310

Bone growth in length occurs at the epiphyseal plate in:

- A) flat bones.
- B) long bones.
- C) irregular bones.
- D) short bones.

Answer: <https://biology-forums.com/index.php?topic=498750>

Question 1311

T cells directly interact with antigens without other cells involved.

Answer: <https://biology-forums.com/index.php?topic=501498>

Question 1312

Hypersecretion of growth hormone (GH) that occurs before epiphyseal plates close results in a condition known as acromegaly.

Answer: <https://biology-forums.com/index.php?topic=501032>

Question 1313

The receptor cells for static equilibrium are located in the:

- A) otolithic membrane of the utricle and saccule of the vestibule.
- B) spiral organ (organ of Corti) of the cochlea.
- C) ampullae of the semicircular canals.
- D) maculae of the utricle and saccule of the vestibule.

Answer: <https://biology-forums.com/index.php?topic=500894>

Question 1314

To make a protein, DNA first is replicated into RNA, and then RNA is transcribed into amino acids.

Answer: <https://biology-forums.com/index.php?topic=498496>

Question 1315

Which of the following would be most devastating to damage: motor nerve, sensory nerve, or mixed nerve? Explain.

Answer: <https://biology-forums.com/index.php?topic=500724>

Question 1316

A female wants to take a hormonal contraceptive that contains progesterone only. What could be an option?

- A) spermicide
- B) vaginal rings from NuvaRing
- C) skin patches from ORTHO-EVRA
- D) intramuscular injections of the Depo-Provera shot

Answer: <https://biology-forums.com/index.php?topic=511244>

Question 1317

Mr. Hui had a stroke in the thalamus. Will he experience problems with sensation, motor control, or both? Explain.

Answer: <https://biology-forums.com/index.php?topic=500607>

Question 1318

Explain the relationship between the posterior pituitary and the hypothalamus.

Answer: <https://biology-forums.com/index.php?topic=501044>

Question 1319

The popliteal region is posterior (dorsal) to the patellar region.

Answer: <https://biology-forums.com/index.php?topic=498223>

Question 1320

Which of the following is NOT a function of the skeletal system?

- A) generate heat
- B) protection of underlying organs
- C) encase body cavities
- D) aid in motion

Answer: <https://biology-forums.com/index.php?topic=498857>

Question 1321

While eating, you move your forearm and hand from the plate of food toward your face. Classify the movement occurring at the elbow joint.

- A) inversion
- B) flexion
- C) extension
- D) abduction

Answer: <https://biology-forums.com/index.php?topic=498995>

Question 1322

Describe blood flow through the hepatic portal circulation.

Answer: <https://biology-forums.com/index.php?topic=501293>

Question 1323

What part of the hair dies in response to hormones, such as testosterone, in male pattern baldness?

- A) hair matrix
- B) hair follicle
- C) hair cortex
- D) hair medulla

Answer: <https://biology-forums.com/index.php?topic=498691>

Question 1324

Which of the following is NOT a muscle of the rotator cuff?

- A) supraspinatus
- B) teres major
- C) subscapularis
- D) teres minor

Answer: <https://biology-forums.com/index.php?topic=500228>

Question 1325

Select the statement that best describes lipogenesis.

- A) Amino acids are assembled into proteins during lipogenesis.
- B) Glycogen is converted to glucose during lipogenesis.
- C) Fatty acids are synthesized during lipogenesis.
- D) Fatty acids are converted to glucose during lipogenesis.

Answer: <https://biology-forums.com/index.php?topic=501807>

Question 1326

Of the three regions of the pharynx, only the nasopharynx and laryngopharynx are part of the alimentary canal.

Answer: <https://biology-forums.com/index.php?topic=501724>

Question 1327

What type of organic molecule must undergo transamination prior to being used for ATP synthesis?

- A) glucose
- B) glycerol

- C) fatty acids
- D) amino acids

Answer: <https://biology-forums.com/index.php?topic=501796>

Question 1328

Describe the bands that create the light and dark areas of skeletal muscle fibers known as striations.

Answer: <https://biology-forums.com/index.php?topic=500347>

Question 1329

The myogenic mechanism counters a change in blood flow through a capillary bed by altering arterial resistance.

Answer: <https://biology-forums.com/index.php?topic=501272>

Question 1330

What equalizes pressure on both sides of the tympanic membrane?

- A) round window
- B) pharyngotympanic tube (eustachian tube)
- C) external auditory canal (external acoustic meatus)
- D) oval window

Answer: <https://biology-forums.com/index.php?topic=500875>

Question 1331

Which of the following enhances obligatory water reabsorption?

- A) ATP
- B) aquaporins
- C) presence of high levels of glucose in the filtrate
- D) presence of aldosterone in the distal tubule

Answer: <https://biology-forums.com/index.php?topic=501932>

Question 1332

Predict the effect of decreased levels of dopamine on the substantia nigra of the basal nuclei.

Answer: <https://biology-forums.com/index.php?topic=500608>

Question 1333

Which reaction releases enzymes such as hyaluronidase and acrosin that allow sperm to penetrate the corona radiata of the secondary oocyte?

- A) sperm migration
- B) capacitation
- C) cortical reaction
- D) acrosomal reaction

Answer: <https://biology-forums.com/index.php?topic=511304>

Question 1334

Which letter represents the fibular collateral ligament?

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=499022>

Question 1335

Hairs grow from cells in the matrix of the root that are still undergoing keratinization.

Answer: <https://biology-forums.com/index.php?topic=498716>

Question 1336

What symporter promotes the reabsorption of glucose in the proximal tubule and is dependent upon the sodium ion concentration gradient?

Answer: <https://biology-forums.com/index.php?topic=501962>

Question 1337

Where does the mentalis muscle insert?

- A) skin around the eyelids
- B) hyoid bone
- C) skin of the chin
- D) angle of the mouth

Answer: <https://biology-forums.com/index.php?topic=500197>

Question 1338

What are the two main subdivisions of the nephron?

- A) renal corpuscle and renal tubule
- B) renal cortex and renal medulla
- C) glomerulus and peritubular capillaries
- D) renal pyramids and renal columns

Answer: <https://biology-forums.com/index.php?topic=501894>

Question 1339

Carbohydrate groups on the surfaces of erythrocytes determine blood type and are known as:

- A) tissue factors.
- B) antigens.
- C) agglutinins.
- D) antibodies.

Answer: <https://biology-forums.com/index.php?topic=501355>

Question 1340

Intramembranous ossification occurs in:

- A) arm and leg bones.
- B) skull bones.
- C) secondary bone.
- D) long bones.

Answer: <https://biology-forums.com/index.php?topic=498772>

Question 1341

When an action potential arrives in an axon terminal, synaptic vesicles containing acetylcholine are released by:

- A) exocytosis.
- B) osmosis.
- C) endocytosis.
- D) facilitated diffusion.

Answer: <https://biology-forums.com/index.php?topic=500311>

Question 1342

What is responsible for the emulsification of lipids in the duodenum?

- A) secretin
- B) cholecystokinin (CCK)
- C) bile
- D) pancreatic juice

Answer: <https://biology-forums.com/index.php?topic=501704>

Question 1343

What part of the brain is responsible for cognition?

- A) cerebral cortex
- B) reticular formation
- C) hypothalamus
- D) thalamus

Answer: <https://biology-forums.com/index.php?topic=500572>

Question 1344

Despite the strength of the dermis, it is subject to tearing. How might a person know that the dermis has been previously stretched and/or torn?

- A) The skin will darken due to increased melanin accumulation.
- B) Generally permanent stretch marks, or striae, appear.
- C) Flexure lines appear where the skin has been stressed.
- D) Tension, or cleavage, lines disappear.

Answer: <https://biology-forums.com/index.php?topic=498680>

Question 1345

What bone does NOT articulate with any other bones?

- A) mandible
- B) hyoid bone
- C) maxilla
- D) sternum

Answer: <https://biology-forums.com/index.php?topic=498873>

Question 1346

The knee joint is the most freely moving joint in the human body.

Answer: <https://biology-forums.com/index.php?topic=499039>

Question 1347

The weight-bearing structure of a vertebra is the:

- A) transverse process.
- B) superior articular process.
- C) body.
- D) pedicle.

Answer: <https://biology-forums.com/index.php?topic=498883>

Question 1348

Type I fibers lack:

- A) myoglobin.
- B) mitochondria.
- C) a blood supply.
- D) speed.

Answer: <https://biology-forums.com/index.php?topic=500329>

Question 1349

Which number on the graph represents when voltage-gated sodium channels are open?

- A) 1
- B) 2
- C) 3
- D) 4

Answer: <https://biology-forums.com/index.php?topic=500430>

Question 1350

Briefly discuss the role of the myosin heads in the sliding filament mechanism of muscle contraction.

Answer: <https://biology-forums.com/index.php?topic=500349>

Question 1351

The distal end of the fibula articulates with the:

- A) cuboid.
- B) navicular.
- C) talus.
- D) calcaneus.

Answer: <https://biology-forums.com/index.php?topic=498916>

Question 1352

During the luteal phase of the uterine (menstrual) cycle, the corpus luteum secretes progesterone and some estrogen.

Answer: <https://biology-forums.com/index.php?topic=511263>

Question 1353

Cerebrospinal fluid (CSF) is formed by _____ and reabsorbed through arachnoid granulations into _____.

- A) the cerebral aqueduct; arachnoid villi
- B) choroid plexuses; dural sinuses

- C) astrocytes; ependymal cells
- D) dural sinuses; ependymal cells

Answer: <https://biology-forums.com/index.php?topic=500536>

Question 1354

If the thyroid gland is unable to produce iodinated thyroglobulin, what is the effect on hormone production?

- A) Triiodothyronine (T3) and thyroxine (T4) production continues uninterrupted.
- B) Excess triiodothyronine (T3) and thyroxine (T4) hormones are made.
- C) Less triiodothyronine (T3) and thyroxine (T4) hormones are made.
- D) Less thyroid-stimulating hormone (TSH) is made.

Answer: <https://biology-forums.com/index.php?topic=500980>

Question 1355

Explain how a midsagittal (median) plane differs from a parasagittal plane.

Answer: <https://biology-forums.com/index.php?topic=498245>

Question 1356

During what phase are homologous chromosomes separated from one another and pulled toward opposite poles of the cell by spindle fibers?

- A) anaphase I
- B) metaphase I
- C) anaphase II
- D) telophase I

Answer: <https://biology-forums.com/index.php?topic=511187>

Question 1357

Which of the following factors increases an individual's total body water?

- A) increasing body fat
- B) male
- C) female
- D) increasing age

Answer: <https://biology-forums.com/index.php?topic=501997>

Question 1358

Which of the following arteries has the smallest diameter?

- A) muscular artery
- B) metarteriole
- C) arteriole
- D) elastic artery

Answer: <https://biology-forums.com/index.php?topic=501195>

Question 1359

The majority of the nasal cavity is lined with:

- A) transitional epithelium.
- B) simple squamous epithelium.
- C) pseudostratified ciliated columnar epithelium.
- D) simple cuboidal epithelium.

Answer: <https://biology-forums.com/index.php?topic=501541>

Question 1360

Arteries in the systemic circuit carry oxygenated blood while arteries in the pulmonary circuit transport deoxygenated blood.

Answer: <https://biology-forums.com/index.php?topic=501263>

Question 1361

Sperm in the epididymis travel immediately next to the:

- A) urethra.
- B) efferent ductules.
- C) ductus deferens.
- D) rete testis.

Answer: <https://biology-forums.com/index.php?topic=511190>

Question 1362

What stimulates the release of parathyroid hormone (PTH)?

- A) high blood calcium ion levels
- B) high levels of vitamin D
- C) low blood calcium ion levels
- D) high levels of vitamin C

Answer: <https://biology-forums.com/index.php?topic=498799>

Question 1363

Humans often purchase antiperspirants and deodorants to suppress and mask the odors of secretions from the:

- A) eccrine glands.
- B) apocrine glands.
- C) mammary glands.
- D) sebaceous glands.

Answer: <https://biology-forums.com/index.php?topic=498701>

Question 1364

What anchors thin and elastic filaments in place within the myofibril?

- A) M line
- B) Z disc
- C) A band
- D) I band

Answer: <https://biology-forums.com/index.php?topic=500297>

Question 1365

Sympathetic stimulation of the kidney can do all of the following, EXCEPT:

- A) increase renin secretion.
- B) increase blood concentration of angiotensin-II (A-II).
- C) constrict both the afferent and efferent arterioles.
- D) increase the glomerular filtration rate (GFR).

Answer: <https://biology-forums.com/index.php?topic=501928>

Question 1366

Two types of active transport via vesicles are:

- A) endocytosis and exocytosis.
- B) primary active transport and secondary active transport.
- C) diffusion and osmosis.
- D) simple diffusion and facilitated diffusion.

Answer: <https://biology-forums.com/index.php?topic=498419>

Question 1367

A process that requires energy to move a substance against its concentration gradient is called:

- A) active transport.
- B) passive transport.
- C) facilitated transport.
- D) osmosis.

Answer: <https://biology-forums.com/index.php?topic=498416>

Question 1368

Which ions are critical for the activation of some enzymes?

- A) chlorine ions
- B) magnesium ions
- C) fluorine ions
- D) potassium ions

Answer: <https://biology-forums.com/index.php?topic=502038>

Question 1369

The elbow and knee are examples of ball-and-socket joints.

Answer: <https://biology-forums.com/index.php?topic=499037>

Question 1370

A patient in the emergency department sustained a knife wound to the abdomen. The wound extended through the membranes surrounding the large intestine, into the layers of the large intestine, and into the lumen of the large intestine. Discuss the membranes and layers that were penetrated, from superficial (outermost) to deep (innermost).

Answer: <https://biology-forums.com/index.php?topic=501735>

Question 1371

You are looking at a slide during laboratory using a microscope. How can you tell the difference between cilia and microvilli?

Answer: <https://biology-forums.com/index.php?topic=498478>

Question 1372

The movement of sperm, testicular fluids, and secretions from the prostate gland and seminal vesicle into the urethra is known as:

- A) expulsion.
- B) ejaculation.
- C) erection.
- D) emission.

Answer: <https://biology-forums.com/index.php?topic=511209>

Question 1373

What type of cell junction would most likely prevent water from flowing between our cells?

- A) glycoproteins
- B) tight junctions
- C) desmosomes
- D) gap junctions

Answer: <https://biology-forums.com/index.php?topic=498554>

Question 1374

A short-term effect of growth hormone is:

- A) the stimulation of glucose uptake by cells.
- B) protein synthesis.
- C) the production of insulin-like growth factor (IGF).
- D) fat breakdown.

Answer: <https://biology-forums.com/index.php?topic=500972>

Question 1375

Which ligament of the coxal joint supports the inferior aspect of the joint?

- A) iliofemoral ligament
- B) pubofemoral ligament
- C) ischiofemoral ligament
- D) ligament of the head of the femur

Answer: <https://biology-forums.com/index.php?topic=499028>

Question 1376

Which of the following blood types would agglutinate if donated to a person with blood type A+?

- A) A-
- B) B-
- C) O-
- D) O+

Answer: <https://biology-forums.com/index.php?topic=501361>

Question 1377

How do neurons and neuroglial cells differ in their functions as part of nervous tissue?

Answer: <https://biology-forums.com/index.php?topic=498625>

Question 1378

During abdominal surgery, the surgeon makes a cut lateral to the linea alba. Discuss the location of the linea alba and the muscle that has been cut.

Answer: <https://biology-forums.com/index.php?topic=500273>

Question 1379

What part of the scapula articulates with the humerus?

- A) supraspinous fossa
- B) coracoid process
- C) glenoid cavity
- D) acromion

Answer: <https://biology-forums.com/index.php?topic=498892>

Question 1380

Interoceptors detect stimuli from the inside of the body, such as blood pressure, stretch of a full urinary bladder, and the body's temperature.

Answer: <https://biology-forums.com/index.php?topic=500696>

Question 1381

Select the correct pathway to form a monocyte through the process of leukopoiesis.

- A) HSC, myeloid stem cell, myeloblast, promyelocyte, monocyte band cell, monocyte
- B) HSC, myeloid stem cell, monoblast, promonocyte, monocyte
- C) HSC, lymphoid stem cell, myeloid stem cell, monoblast, promonocyte, monocyte
- D) HSC, lymphoid stem cell line, monoblast, promonocyte, monocyte

Answer: <https://biology-forums.com/index.php?topic=501338>

Question 1382

What shuffles the alleles and causes homologous chromosomes to no longer be identical during meiosis?

- A) synapsis
- B) crossing over
- C) formation of tetrads
- D) cytokinesis

Answer: <https://biology-forums.com/index.php?topic=511188>

Question 1383

What part of the myofibril shortens to produce contractions of the muscle fiber?

- A) sarcomere
- B) myosin filaments
- C) A band
- D) elastic filaments

Answer: <https://biology-forums.com/index.php?topic=500301>

Question 1384

Which of the following is a primary endocrine organ?

- A) thyroid gland
- B) heart
- C) testes
- D) pineal gland

Answer: <https://biology-forums.com/index.php?topic=500943>

Question 1385

Surface barriers, such as the cutaneous and mucous membranes, provide innate immunity against pathogens.

Answer: <https://biology-forums.com/index.php?topic=501493>

Question 1386

Where is a condylar joint found?

- A) between the first metacarpophalangeal joint of the thumb and the trapezium
- B) elbow joint
- C) metacarpophalangeal joints of fingers 2-5
- D) atlantoaxial joint

Answer: <https://biology-forums.com/index.php?topic=499012>

Question 1387

What nerves carry information about the special senses to the CNS?

- A) cranial nerves only
- B) spinal nerves only
- C) cervical nerves only
- D) both cranial and spinal nerves

Answer: <https://biology-forums.com/index.php?topic=500825>

Question 1388

Which of the following does NOT belong to the axial skeleton?

- A) skull
- B) pectoral girdle
- C) vertebral column
- D) thoracic cage

Answer: <https://biology-forums.com/index.php?topic=498851>

Question 1389

Perception occurs in the CNS and is a conscious awareness of a sensation.

Answer: <https://biology-forums.com/index.php?topic=500591>

Question 1390

What is the role of DNA helicase during the S phase of interphase?

- A) DNA helicase unwinds the two strands of DNA.
- B) DNA helicase catalyzes the addition of nucleotides to the new DNA strands.
- C) DNA helicase removes the RNA primer and replaces it with DNA.
- D) DNA helicase builds RNA primers on the existing DNA strands.

Answer: <https://biology-forums.com/index.php?topic=498460>

Question 1391

How many antigen-binding sites for antigens does each IgG antibody possess on its V regions?

- A) 1
- B) 2
- C) 4
- D) 6

Answer: <https://biology-forums.com/index.php?topic=501450>

Question 1392

Select the letter representing the nasolacrimal duct.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500846>

Question 1393

What is the role of ATP in the cell?

Answer: <https://biology-forums.com/index.php?topic=498368>

Question 1394

Assess the following functional classes of joints and order them from least amount of mobility to greatest amount of mobility: amphiarthrosis, diarthrosis, synarthrosis.

Answer: <https://biology-forums.com/index.php?topic=499042>

Question 1395

Explain how dehydration and overhydration differ.

Answer: <https://biology-forums.com/index.php?topic=511165>

Question 1396

Which of the following does NOT transport bile?

- A) accessory pancreatic duct
- B) cystic duct

C) common hepatic duct

D) common bile duct

Answer: <https://biology-forums.com/index.php?topic=501707>

Question 1397

Discuss three hormones that regulate sodium ion concentration in the extracellular fluid (ECF).

Answer: <https://biology-forums.com/index.php?topic=511169>

Question 1398

Which lymph trunks receive lymph from the upper limbs?

A) intestinal trunks

B) jugular trunks

C) bronchomediastinal trunks

D) subclavian trunks

Answer: <https://biology-forums.com/index.php?topic=501398>

Question 1399

Select the appropriate directional term to complete this sentence: The elbow is _____ to the wrist.

A) inferior (caudal)

B) proximal

C) distal

D) superficial

Answer: <https://biology-forums.com/index.php?topic=498184>

Question 1400

What is NOT part of the cardiac conduction system?

A) atrioventricular (AV) node

B) atrioventricular (AV) bundle

C) atrioventricular (AV) valve

D) sinoatrial (SA) node

Answer: <https://biology-forums.com/index.php?topic=501119>

Question 1401

What hormone is the primary antagonist of glucagon?

A) thyroid hormone

B) growth hormone

C) insulin

D) cortisol

Answer: <https://biology-forums.com/index.php?topic=501015>

Question 1402

Which biological catalyst lowers the activation energy of a reaction?

A) carbohydrate

B) enzyme

C) lipid

D) salt

Answer: <https://biology-forums.com/index.php?topic=498307>

Question 1403

The anterior root and posterior root fuse to form a(n):

A) anterior horn.

B) posterior (dorsal) root ganglion.

C) spinal nerve.

D) posterior horn.

Answer: <https://biology-forums.com/index.php?topic=500644>

Question 1404

What are possible products of glycolytic, or anaerobic, catabolism?

A) glucose only

- B) oxygen only
- C) creatine phosphate only
- D) ATP, pyruvate, and lactic acid

Answer: <https://biology-forums.com/index.php?topic=500322>

Question 1405

At its two distinct ends, the clavicle articulates with the manubrium of the sternum and the acromion of the scapula.

Answer: <https://biology-forums.com/index.php?topic=498930>

Question 1406

What plasma protein is most important for the blood's colloid osmotic pressure?

- A) transport proteins
- B) antibodies
- C) albumin
- D) collagen

Answer: <https://biology-forums.com/index.php?topic=501311>

Question 1407

Discuss the five waves seen on an electrocardiogram (ECG) and explain what they represent.

Answer: <https://biology-forums.com/index.php?topic=501187>

Question 1408

Cross-sectional area increases as arteries branch into smaller vessels, causing the blood to flow more slowly.

Answer: <https://biology-forums.com/index.php?topic=501266>

Question 1409

The shoulder and hip joints are similar because they are both:

- A) ball-and-socket joints.
- B) biaxial joints.
- C) uniaxial joints.
- D) hinge joints.

Answer: <https://biology-forums.com/index.php?topic=499025>

Question 1410

Determine the effect of hypocalcemia on the heart.

- A) As a result of hypocalcemia, heart contractions are shorter.
- B) As a result of hypocalcemia, the plateau phase of the cardiac muscle cell action potential is lengthened.
- C) As a result of hypocalcemia, heart contractions are weaker.
- D) The heart is not affected by hypocalcemia.

Answer: <https://biology-forums.com/index.php?topic=502036>

Question 1411

Which muscle adducts the fingers?

- A) dorsal interossei
- B) extensor indicis
- C) palmar interossei
- D) flexor pollicis longus

Answer: <https://biology-forums.com/index.php?topic=500231>

Question 1412

Explain why fibrocartilage is structurally well-suited to its function.

Answer: <https://biology-forums.com/index.php?topic=498621>

Question 1413

Place the following steps of bone repair in the correct sequence.

1. The bone callus is remodeled and primary bone is replaced with secondary bone.
2. A hematoma fills the gap between bone fragments.
3. Osteoblasts built a new bone callus.
4. Fibroblasts and chondroblasts infiltrate the hematoma and a soft callus forms.

- A) 3, 2, 4, 1
- B) 3, 2, 1, 4
- C) 2, 4, 3, 1
- D) 2, 3, 4, 1

Answer: <https://biology-forums.com/index.php?topic=498802>

Question 1414

Acetylcholine (ACh) may excite postsynaptic neurons in the CNS; however, it may inhibit some postsynaptic neurons in the PNS. Explain how acetylcholine can be both excitatory and inhibitory.

Answer: <https://biology-forums.com/index.php?topic=500489>

Question 1415

Which of the following represents the systemic flow of most blood?

- A) arteriole, artery, capillary bed, venule, vein
- B) artery, arteriole, capillary bed, venule, vein
- C) arteriole, artery, capillary bed, vein, venule
- D) artery, arteriole, capillary bed, vein, venule

Answer: <https://biology-forums.com/index.php?topic=501262>

Question 1416

The completion of cytokinesis accompanies:

- A) anaphase.
- B) metaphase.
- C) prophase.
- D) telophase.

Answer: <https://biology-forums.com/index.php?topic=498463>

Question 1417

Carbon dioxide is a small molecule that moves through the phospholipid bilayer with its concentration gradient by:

- A) facilitated diffusion.
- B) osmosis.
- C) primary active transport.
- D) simple diffusion.

Answer: <https://biology-forums.com/index.php?topic=498404>

Question 1418

Hydrogen bonds may occur between:

- A) polar molecules.
- B) nonpolar covalent molecules.
- C) ions.
- D) metals.

Answer: <https://biology-forums.com/index.php?topic=498298>

Question 1419

Explain how the primary visual cortex differs functionally from the visual association areas.

Answer: <https://biology-forums.com/index.php?topic=500598>

Question 1420

Julia has diabetes mellitus and is experiencing ketoacidosis. What does her body use to generate ATP?

- A) glucose
- B) fatty acids
- C) glycerol
- D) glycogen

Answer: <https://biology-forums.com/index.php?topic=501794>

Question 1421

Gretchen broke both her medial and lateral ankle on her right leg. Briefly explain the bone(s) and specific parts she broke.

Answer: <https://biology-forums.com/index.php?topic=498951>

Question 1422

What is the first major event of organogenesis?

- A) formation of the endocrine glands
- B) neurulation
- C) formation of the skin
- D) formation of somites

Answer: <https://biology-forums.com/index.php?topic=511326>

Question 1423

Decreased parasympathetic stimulation could cause:

- A) a slow heart rate.
- B) bronchodilation.
- C) a dry mouth.
- D) frequent urination.

Answer: <https://biology-forums.com/index.php?topic=500786>

Question 1424

From one original cell, four genetically unique daughter cells, each with 23 nonreplicated chromosomes, are produced at the conclusion of meiosis II of spermatogenesis.

Answer: <https://biology-forums.com/index.php?topic=511254>

Question 1425

Explain why humans should avoid drinking salt water.

Answer: <https://biology-forums.com/index.php?topic=498473>

Question 1426

Determine the polysynaptic reflex from this list of examples.

- A) jaw-jerk reflex
- B) patellar (knee-jerk) reflex
- C) flexion (withdrawal) reflex
- D) simple stretch reflex

Answer: <https://biology-forums.com/index.php?topic=500681>

Question 1427

Most organs experience dual innervation from the sympathetic and parasympathetic nervous systems.

Answer: <https://biology-forums.com/index.php?topic=500803>

Question 1428

Type I diabetes mellitus is caused by a lack of:

- A) aldosterone.
- B) antidiuretic hormone (ADH).
- C) glucagon.
- D) insulin.

Answer: <https://biology-forums.com/index.php?topic=501014>

Question 1429

Which of the following movements is an example of abduction?

- A) spreading the fingers apart
- B) moving the hand toward the shoulder
- C) extreme bending of the head backwards
- D) turning the palm of the hand upward

Answer: <https://biology-forums.com/index.php?topic=498994>

Question 1430

The fetal period extends from the beginning of week 4 until the end of week 8.

Answer: <https://biology-forums.com/index.php?topic=511382>

Question 1431

Where does transcription of DNA into RNA occur?

- A) nucleus
- B) mitochondrion
- C) Golgi apparatus
- D) peroxisome

Answer: <https://biology-forums.com/index.php?topic=498443>

Question 1432

What bones form the forearm (antebrachium)?

- A) ulna and radius
- B) carpals and metacarpals
- C) tibia and fibula
- D) scapula and humerus

Answer: <https://biology-forums.com/index.php?topic=498898>

Question 1433

Which hormone lowers blood glucose levels?

- A) glucagon
- B) cortisol
- C) growth hormone
- D) insulin

Answer: <https://biology-forums.com/index.php?topic=501010>

Question 1434

What is the function of the sarcoplasmic reticulum?

Answer: <https://biology-forums.com/index.php?topic=500345>

Question 1435

Summarize the role of the parasympathetic nervous system in maintaining homeostasis.

Answer: <https://biology-forums.com/index.php?topic=500813>

Question 1436

The transverse (horizontal plane or cross section) plane divides the body into anterior and posterior parts.

Answer: <https://biology-forums.com/index.php?topic=498224>

Question 1437

Does a local potential guarantee the creation of an action potential? Explain.

Answer: <https://biology-forums.com/index.php?topic=500495>

Question 1438

Upper motor neurons directly contact and stimulate skeletal muscle fibers to contract.

Answer: <https://biology-forums.com/index.php?topic=500699>

Question 1439

Which of the following is NOT an artery that branches off the aortic arch?

- A) right subclavian artery
- B) left subclavian artery
- C) brachiocephalic artery
- D) left common carotid artery

Answer: <https://biology-forums.com/index.php?topic=501245>

Question 1440

Which of the following glands is located in the anterior neck, just superficial to the larynx?

- A) pancreas
- B) thymus
- C) thyroid gland

D) pituitary gland

Answer: <https://biology-forums.com/index.php?topic=500975>

Question 1441

Some forms of hormonal birth control, such as the Depo-Provera shot, contain progesterone only. Explain how these types of birth control prevent pregnancy.

Answer: <https://biology-forums.com/index.php?topic=511294>

Question 1442

Which muscle is a powerful agonist of adduction and medial rotation of the arm?

- A) brachialis
- B) latissimus dorsi
- C) pectoralis minor
- D) deltoid

Answer: <https://biology-forums.com/index.php?topic=500225>

Question 1443

How much urine, in liters, is typically produced in a 24 hour period?

- A) 0.5
- B) 0.9
- C) 1.8
- D) 4.3

Answer: <https://biology-forums.com/index.php?topic=501938>

Question 1444

Which vessel supplies the systemic circuit with oxygenated blood?

- A) pulmonary trunk
- B) aorta
- C) superior vena cava
- D) coronary sinus

Answer: <https://biology-forums.com/index.php?topic=501092>

Question 1445

What cells display portions of the pathogens (antigens) they ingest on their plasma membranes?

- A) basophils
- B) antigen-presenting cells
- C) eosinophils
- D) natural killer (NK) cells

Answer: <https://biology-forums.com/index.php?topic=501422>

Question 1446

Select the simplest sugar:

- A) sucrose
- B) lactose
- C) glucose
- D) starch

Answer: <https://biology-forums.com/index.php?topic=498333>

Question 1447

Describe the relationship between genes, triplets, codons, and amino acids.

Answer: <https://biology-forums.com/index.php?topic=498480>

Question 1448

Explain why blood pressure in the pulmonary circuit is lower than in the systemic circuit.

Answer: <https://biology-forums.com/index.php?topic=501280>

Question 1449

Which germ layer forms the gonads and kidneys?

- A) endoderm

- B) mesoderm
- C) ectoderm
- D) notochord

Answer: <https://biology-forums.com/index.php?topic=511329>

Question 1450

An old saying goes, "For every child, a tooth is lost." This saying suggests that a mother may lose a tooth for each child she births. Predict the hormone responsible for this potential pregnancy issue.

Answer: <https://biology-forums.com/index.php?topic=511416>

Question 1451

Define hemostasis and name the steps involved.

Answer: <https://biology-forums.com/index.php?topic=501383>

Question 1452

Which of the following accompanies emphysema?

- A) alveoli collapse and surface area is lost
- B) pulmonary compliance decreases
- C) decreased partial pressure of carbon dioxide in the blood
- D) increase in vital capacity

Answer: <https://biology-forums.com/index.php?topic=501603>

Question 1453

What can we consciously control about the defecation reflex?

- A) relaxation of the rectum
- B) relaxation of the internal anal sphincter
- C) relaxation of the gastroesophageal sphincter
- D) relaxation of the external anal sphincter

Answer: <https://biology-forums.com/index.php?topic=501697>

Question 1454

Explain the negative feedback loop by which erythropoiesis is regulated.

Answer: <https://biology-forums.com/index.php?topic=501378>

Question 1455

Generally, coronary veins empty into a vessel known as the:

- A) superior vena cava.
- B) aorta.
- C) coronary sinus.
- D) inferior vena cava.

Answer: <https://biology-forums.com/index.php?topic=501087>

Question 1456

Which of the following muscles is NOT associated with the mouth?

- A) orbicularis oris
- B) depressor anguli oris
- C) orbicularis oculi
- D) depressor labii inferioris

Answer: <https://biology-forums.com/index.php?topic=500202>

Question 1457

A hypothetical drug reduces osteoblast activity, but has no effect on osteoclast activity. Predict the effects of this hypothetical drug on bone resorption and bone deposition.

Answer: <https://biology-forums.com/index.php?topic=498850>

Question 1458

Pus indicates only that an inflammatory response took place.

Answer: <https://biology-forums.com/index.php?topic=501495>

Question 1459

What is occurring when an antibody renders bacterial toxins, viral proteins, or animal venom inactive?

- A) complement activation
- B) opsonization
- C) neutralization
- D) agglutination

Answer: <https://biology-forums.com/index.php?topic=501472>

Question 1460

Damage to the substantia nigra of the midbrain would be indicated by problems with:

- A) heart rate.
- B) respiration.
- C) sense of smell.
- D) movement.

Answer: <https://biology-forums.com/index.php?topic=500526>

Question 1461

Dense irregular collagenous connective tissue resists tension in only one plane while dense regular connective tissue resists tension in all three planes.

Answer: <https://biology-forums.com/index.php?topic=498634>

Question 1462

The following has been determined from an arterial blood gas (ABG) sample: elevated arterial PCO₂ level and a low blood pH. Determine the acid-base imbalance.

- A) respiratory acidosis
- B) respiratory alkalosis
- C) metabolic acidosis
- D) metabolic alkalosis

Answer: <https://biology-forums.com/index.php?topic=511142>

Question 1463

Cyanide interferes with oxidative catabolism. Determine what organelle is affected by cyanide and predict the effects of cyanide on how the organelle functions.

Answer: <https://biology-forums.com/index.php?topic=498545>

Question 1464

Unipennate muscles have fascicles that wrap around a bone or have a twisted appearance.

Answer: <https://biology-forums.com/index.php?topic=500250>

Question 1465

Like the carbohydrates, lipids have twice the hydrogen atoms as carbon and oxygen atoms in their molecular structures.

Answer: <https://biology-forums.com/index.php?topic=498380>

Question 1466

Which of the following vessels carries oxygenated blood?

- A) pulmonary vein
- B) superior vena cava
- C) pulmonary artery
- D) pulmonary trunk

Answer: <https://biology-forums.com/index.php?topic=501091>

Question 1467

The pharyngeal constrictor muscles propel food from the throat into the esophagus when swallowing.

Answer: <https://biology-forums.com/index.php?topic=500256>

Question 1468

Describe the functional difference between the conducting zone and the respiratory zone of the respiratory tract.

Answer: <https://biology-forums.com/index.php?topic=501605>

Question 1469

The main component of the cytosol is:

- A) water.
- B) organelles.
- C) sugars.
- D) the nucleus.

Answer: <https://biology-forums.com/index.php?topic=498396>

Question 1470

The unit of DNA that specifies a certain amino acid is called a _____, the same unit of mRNA is called a(n) _____ which, during protein synthesis, is matched by the _____ of tRNA.

- A) triplet, codon, anticodon
- B) nucleotide, triplet, gene
- C) gene, triplet, amino acid
- D) triplet, anticodon, codon

Answer: <https://biology-forums.com/index.php?topic=498442>

Question 1471

Discuss how parathyroid hormone (PTH) maintains normal blood calcium ion concentration.

Answer: <https://biology-forums.com/index.php?topic=501050>

Question 1472

Which of the following vascular shunts connects the fetal left and right atria?

- A) foramen ovale
- B) ductus venosus
- C) fossa ovalis
- D) ductus arteriosus

Answer: <https://biology-forums.com/index.php?topic=511343>

Question 1473

Jose is having back surgery. Discuss the specific type of section the surgeon should use to make a cut along his vertebral region.

Answer: <https://biology-forums.com/index.php?topic=498256>

Question 1474

What chemical binds free hydrogen ions in solution?

- A) acid
- B) salt
- C) base
- D) water

Answer: <https://biology-forums.com/index.php?topic=498314>

Question 1475

When is the generation of an action potential impossible, no matter the strength of the stimulus?

- A) depolarization
- B) threshold
- C) absolute refractory period
- D) relative refractory period

Answer: <https://biology-forums.com/index.php?topic=500434>

Question 1476

Which of the following is NOT a process occurring in the oral cavity?

- A) ingestion
- B) chemical digestion
- C) segmentation
- D) propulsion

Answer: <https://biology-forums.com/index.php?topic=501653>

Question 1477

Why are the rings of cartilage surrounding the trachea C-shaped?

- A) The C rings of cartilage allow the esophagus to expand during swallowing.
- B) The C rings of cartilage allow the trachea to change diameter during breathing.
- C) The C rings of cartilage keep the trachea patent (open).
- D) The C rings of cartilage allow the esophagus to expand during swallowing, allow the trachea to change diameter during breathing, and keep the trachea patent (open).

Answer: <https://biology-forums.com/index.php?topic=501548>

Question 1478

The vagus nerve appears to regulate both peristalsis and segmentation in the small intestine.

Answer: <https://biology-forums.com/index.php?topic=501730>

Question 1479

Briefly explain the role of the sympathetic nervous system in maintaining homeostasis.

Answer: <https://biology-forums.com/index.php?topic=500808>

Question 1480

What organ is served by the parasympathetic sacral nerves?

- A) last portion of the large intestine
- B) esophagus
- C) heart
- D) lungs

Answer: <https://biology-forums.com/index.php?topic=500776>

Question 1481

Which of the following is the main hormone that regulates spermatogenesis?

- A) estrogen
- B) testosterone
- C) growth hormone
- D) inhibin

Answer: <https://biology-forums.com/index.php?topic=511205>

Question 1482

The best fetal position for birth is the:

- A) buttocks-first position.
- B) vertex position.
- C) nonvertex position.
- D) breech position.

Answer: <https://biology-forums.com/index.php?topic=511362>

Question 1483

What effect do you think douching, or washing, has on the vagina?

- A) Douching damages the ridge-like rugae inside the vagina.
- B) Douching washes away beneficial bacteria and alters the pH balance of the vagina.
- C) Douching removes mucus made by the stratified squamous epithelium of the vaginal walls.
- D) Douching washes away the cilia lining the mucous membrane of the vagina.

Answer: <https://biology-forums.com/index.php?topic=511224>

Question 1484

A female will express the trait for an X-linked disorder only if she is homozygous for the recessive allele.

Answer: <https://biology-forums.com/index.php?topic=511394>

Question 1485

Where is antidiuretic hormone (ADH, or vasopressin) made?

- A) thyroid gland
- B) posterior pituitary
- C) anterior pituitary

D) hypothalamus

Answer: <https://biology-forums.com/index.php?topic=500962>

Question 1486

Platelets can undergo mitosis and perform repairs if damaged.

Answer: <https://biology-forums.com/index.php?topic=501368>

Question 1487

Christina's fair skin flushes red when she exercises. What is the name of this condition and why does her skin appear red?

Answer: <https://biology-forums.com/index.php?topic=498728>

Question 1488

Discuss the function of cartilage in intervertebral discs.

Answer: <https://biology-forums.com/index.php?topic=500167>

Question 1489

The epiphyseal plate is a layer of compact bone from which longitudinal growth occurs.

Answer: <https://biology-forums.com/index.php?topic=498812>

Question 1490

Which organ's position causes the left lung to be shaped differently from the right lung?

- A) esophagus
- B) heart
- C) liver
- D) stomach

Answer: <https://biology-forums.com/index.php?topic=501549>

Question 1491

From proximal to distal, what bones form the upper limb?

- 1. carpals
- 2. humerus
- 3. metacarpals
- 4. phalanges
- 5. ulna and radius

- A) 2, 5, 1, 3, 4
- B) 2, 5, 4, 3, 1
- C) 2, 5, 1, 4, 3
- D) 5, 2, 1, 3, 4

Answer: <https://biology-forums.com/index.php?topic=498891>

Question 1492

Lukas arrived at the hospital dehydrated from having spent the past few days with diarrhea and vomiting. Is a hypertonic solution suitable for him?

Explain.

Answer: <https://biology-forums.com/index.php?topic=498474>

Question 1493

A weak superior oblique muscle would impair:

- A) depression of the eye and lateral movement.
- B) superior movement of the eye.
- C) lateral movement and elevation of the eye.
- D) inferior and lateral movement of the eye.

Answer: <https://biology-forums.com/index.php?topic=500847>

Question 1494

Erythromycin is an antibiotic that prevents the tRNA molecule from moving from the A site to the P site on the rRNA complex during translation in bacterial ribosomes. Predict the effects of this drug on protein synthesis.

Answer: <https://biology-forums.com/index.php?topic=498546>

Question 1495

Discuss the neuroglial cells that form the myelin sheaths in the CNS and the PNS and some of their differences.

Answer: <https://biology-forums.com/index.php?topic=500478>

Question 1496

Which of the following accounts for the majority of our total body water?

- A) extracellular fluid
- B) cytosol
- C) interstitial fluid
- D) plasma

Answer: <https://biology-forums.com/index.php?topic=501998>

Question 1497

Maddie planned to go for a swim after dinner. But, after a large meal, she decided to rest rather than swim. What neurotransmitter promotes rest by binding muscarinic receptors after her meal?

- A) epinephrine
- B) adrenalin
- C) norepinephrine
- D) acetylcholine

Answer: <https://biology-forums.com/index.php?topic=500782>

Question 1498

You have received a copy of your blood report. You were happy to see high levels of:

- A) cholesterol.
- B) very-low density lipoproteins (VLDLs).
- C) high-density lipoproteins (HDLs).
- D) low-density lipoproteins (LDLs).

Answer: <https://biology-forums.com/index.php?topic=501835>

Question 1499

Which prominent arch runs along the medial side of the foot from the calcaneus to metatarsals I-III?

- A) frontal arch
- B) transverse arch
- C) medial longitudinal arch
- D) lateral longitudinal arch

Answer: <https://biology-forums.com/index.php?topic=498921>

Question 1500

A region of skin has a great number of sensory neurons, and each neuron has a relatively small receptive field. The two-point discrimination threshold for this skin region might be:

- A) 5 mm.
- B) 15 mm.
- C) 25 mm.
- D) 40 mm.

Answer: <https://biology-forums.com/index.php?topic=500665>

Question 1501

Voltage-gated sodium channels have both an activation gate and:

- A) an inactivation gate.
- B) a leak gate.
- C) a threshold gate.
- D) a swinging gate.

Answer: <https://biology-forums.com/index.php?topic=500428>

Question 1502

Eight-year-old Cate stood by her mother's bed, watching her sleep and perplexed by the rapid movement of her mother's eyes beneath the eyelids. We know Cate's mother was experiencing stage III sleep by what Cate witnessed.

Answer: <https://biology-forums.com/index.php?topic=500594>

Question 1503

The reduction in the number of chromosomes to half the normal count occurs during:

- A) crossing over.
- B) fertilization.
- C) meiosis.
- D) mitosis.

Answer: <https://biology-forums.com/index.php?topic=511182>

Question 1504

Two or more atoms of different elements that are chemically bonded together are known as:

- A) molecules.
- B) macromolecules.
- C) compounds.
- D) ions.

Answer: <https://biology-forums.com/index.php?topic=498290>

Question 1505

Bones with a diaphysis and epiphyses are classified as:

- A) short bones.
- B) long bones.
- C) flat bones.
- D) irregular bones.

Answer: <https://biology-forums.com/index.php?topic=498747>

Question 1506

Which of the following is INCORRECT about the numbers of spinal nerves?

- A) 5 pairs of sacral spinal nerves
- B) 5 pairs of lumbar spinal nerves
- C) 7 pairs of cervical spinal nerves
- D) 12 pairs of thoracic spinal nerves

Answer: <https://biology-forums.com/index.php?topic=500642>

Question 1507

What is NOT part of the diencephalon?

- A) thalamus
- B) epithalamus
- C) medulla oblongata
- D) hypothalamus

Answer: <https://biology-forums.com/index.php?topic=500521>

Question 1508

What two values are needed to calculate mean arterial pressure (MAP)?

- A) diastolic pressure and systolic pressure
- B) stroke volume and cardiac output
- C) blood vessel length and blood vessel radius
- D) heart rate and peripheral resistance

Answer: <https://biology-forums.com/index.php?topic=501210>

Question 1509

Fontanels and unfused sutures give the fetal skull a significant amount of flexibility.

Answer: <https://biology-forums.com/index.php?topic=498926>

Question 1510

Explain how exergonic and endergonic reactions differ.

Answer: <https://biology-forums.com/index.php?topic=501856>

Question 1511

Which neurotransmitter ensures skeletal muscles receive the supply of nutrients needed to make ATP by stimulating the release of more fatty acids

and glucose into the blood stream?

- A) acetylcholine
- B) aldosterone
- C) norepinephrine
- D) epinephrine

Answer: <https://biology-forums.com/index.php?topic=500767>

Question 1512

What brain region is responsible for learning, memory, and personality?

- A) cerebrum
- B) cerebellum
- C) diencephalon
- D) brainstem

Answer: <https://biology-forums.com/index.php?topic=500499>

Question 1513

What is the function of the valves in the heart?

- A) promote contraction of the ventricles
- B) prevent backflow of blood through the heart
- C) eliminate pressure variances within the heart
- D) invert during contraction of the ventricles

Answer: <https://biology-forums.com/index.php?topic=501089>

Question 1514

Predict the effect on the ventricles if the AV node delay was shorter than normal.

Answer: <https://biology-forums.com/index.php?topic=501178>

Question 1515

In the ascending limb of the nephron loop (loop of Henle), the:

- A) movement of water and solutes is passive.
- B) thick segment is permeable to water but impermeable to sodium and chloride ions.
- C) thin segment is not permeable to sodium ions, chloride ions, or water.
- D) thick segment is impermeable to water but permeable to sodium and chloride ions.

Answer: <https://biology-forums.com/index.php?topic=501933>

Question 1516

Which nervous system controls the migrating motor complex of the small intestine?

- A) central nervous system
- B) enteric nervous system
- C) sympathetic nervous system
- D) somatic nervous system

Answer: <https://biology-forums.com/index.php?topic=501687>

Question 1517

What is a good strategy for class or laboratory preparation?

- A) Read and prepare notes before attending your class or laboratory.
- B) Avoid reading before class as you may get confused.
- C) Only read after you have attended class or laboratory.
- D) Focus on reading your materials on the weekends when you have hours to spend.

Answer: <https://biology-forums.com/index.php?topic=498165>

Question 1518

What bone does NOT contribute to the formation of the orbit?

- A) ethmoid bone
- B) frontal bone
- C) sphenoid bone
- D) temporal bone

Answer: <https://biology-forums.com/index.php?topic=498875>

Question 1519

Discuss the type of contractions produced by type I muscle fibers.

Answer: <https://biology-forums.com/index.php?topic=500359>

Question 1520

What protein makes stratified epithelial tissues resistant to friction?

- A) reticular
- B) keratin
- C) collagen
- D) elastic

Answer: <https://biology-forums.com/index.php?topic=498567>

Question 1521

Which antibody is NOT secreted by B cells in significant amounts?

- A) IgG
- B) IgM
- C) IgE
- D) IgD

Answer: <https://biology-forums.com/index.php?topic=501453>

Question 1522

Describe the functions of the lymphatic system.

Answer: <https://biology-forums.com/index.php?topic=501505>

Question 1523

In both general and (most) special sensation, information is first processed by sensory nuclei and then transmitted to the thalamus and to primary cortex areas for awareness and identification.

Answer: <https://biology-forums.com/index.php?topic=500901>

Question 1524

Which bone lacks a paranasal sinus?

- A) frontal
- B) zygomatic
- C) maxillary
- D) ethmoid

Answer: <https://biology-forums.com/index.php?topic=501540>

Question 1525

The linea aspera is located on the:

- A) femur.
- B) tibia.
- C) talus.
- D) fibula.

Answer: <https://biology-forums.com/index.php?topic=498911>

Question 1526

Mrs. Watkins has COPD, an obstructive respiratory disorder. An arterial blood gas (ABG) sample was taken and the following observed: an elevated arterial PCO₂, lower than normal blood pH, and an elevated bicarbonate ion level. Determine the cause of her acid-base balance and the degree to which compensation, if any, is present.

Answer: <https://biology-forums.com/index.php?topic=511180>

Question 1527

Thermoreceptors detect temperature changes in the skin and internal body fluids.

Answer: <https://biology-forums.com/index.php?topic=498709>

Question 1528

Explain how changes in volume and pressure lead to pulmonary ventilation.

Answer: <https://biology-forums.com/index.php?topic=501614>

Question 1529

Each of the following muscles acts to flex the leg, EXCEPT:

- A) semitendinosus.
- B) gracilis.
- C) vastus lateralis.
- D) sartorius.

Answer: <https://biology-forums.com/index.php?topic=500246>

Question 1530

Mrs. Untz, an 80-year-old female, presents with a low glomerular filtration rate (GFR) and has been producing less than 500 mL of urine during a 24 hour period. Why do you think her blood report shows a high level of creatinine and what does it indicate about her kidney function?

Answer: <https://biology-forums.com/index.php?topic=501990>

Question 1531

What part of a neuron conducts electrical signals away from the cell body?

- A) soma
- B) dendrite
- C) neuroglial cell
- D) axon

Answer: <https://biology-forums.com/index.php?topic=498596>

Question 1532

What type of birth control may prevent pregnancy by manipulating the hormones and interfering with ovulation?

- A) hormonal method
- B) intrauterine device (IUD)
- C) barrier method
- D) behavior method

Answer: <https://biology-forums.com/index.php?topic=511245>

Question 1533

After acetylcholinesterase (AChE) acts, the presynaptic neuron:

- A) reabsorbs acetylcholine.
- B) reabsorbs the acetate.
- C) reabsorbs the choline.
- D) reabsorbs synaptic vesicles.

Answer: <https://biology-forums.com/index.php?topic=500455>

Question 1534

What type of alveolar cell produces surfactant?

- A) alveolar macrophages
- B) type II alveolar cells
- C) dust cells
- D) type I alveolar cells

Answer: <https://biology-forums.com/index.php?topic=501554>

Question 1535

Explain the function of the pharyngotympanic (eustachian) tube.

Answer: <https://biology-forums.com/index.php?topic=500930>

Question 1536

How do melanocytes and keratinocytes work together to protect the skin from UV damage?

- A) Keratinocytes provide the melanocyte with nutrients critical for melanin synthesis.
- B) Keratinocytes accumulate melanin granules to shield the keratinocyte's DNA.
- C) Keratinocytes maintain the proper pH for melanocytes to synthesize melanin granules.
- D) Keratinocytes maintain the appropriate temperature so the melanin will not denature.

Answer: <https://biology-forums.com/index.php?topic=498685>

Question 1537

Which chamber experiences a maximum pressure of around 118 mm Hg during contraction?

- A) right atrium
- B) right ventricle
- C) left atrium
- D) left ventricle

Answer: <https://biology-forums.com/index.php?topic=501138>

Question 1538

Which statement is TRUE regarding antidiuretic hormone (ADH)?

- A) ADH increases the permeability of the late distal tubule and cortical collecting ducts to water.
- B) ADH causes the kidneys to produce very dilute urine.
- C) ADH is secreted in response to low potassium ions in the blood.
- D) ADH promotes water loss and increases urine output.

Answer: <https://biology-forums.com/index.php?topic=501937>

Question 1539

Infants born prematurely do not make enough surfactant to prevent atelectasis. What role does surfactant play in preventing atelectasis? Explain how a lack of surfactant affects pulmonary ventilation.

Answer: <https://biology-forums.com/index.php?topic=501616>

Question 1540

The superior aspect of the pubic bones is the origin of:

- A) external oblique.
- B) internal oblique.
- C) rectus femoris.
- D) rectus abdominis.

Answer: <https://biology-forums.com/index.php?topic=500219>

Question 1541

The deepest stage of sleep is experienced during:

- A) stage I.
- B) stage III.
- C) stage IV.
- D) stage VI.

Answer: <https://biology-forums.com/index.php?topic=500568>

Question 1542

What is accomplished by the power stroke?

- A) The power stroke allows the myosin heads to bind to actin.
- B) The power stroke cocks the myosin head into its high-energy position.
- C) The power stroke causes the myosin and actin filaments to shorten and contract.
- D) The power stroke results in myosin heads pulling actin toward the center of the sarcomere.

Answer: <https://biology-forums.com/index.php?topic=500317>

Question 1543

Which of the following is part of a synovial cavity?

- A) ligament
- B) bursa
- C) tendon
- D) synovial membrane

Answer: <https://biology-forums.com/index.php?topic=498983>

Question 1544

Describe the roles of the three horns found in the gray matter of the spinal cord.

Answer: <https://biology-forums.com/index.php?topic=500603>

Question 1545

What percentage of the blood is composed of plasma?

- A) 75%
- B) 45%
- C) 15%
- D) 55%

Answer: <https://biology-forums.com/index.php?topic=501303>

Question 1546

Which letter represents the intercondylar fossa on this image?

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=498914>

Question 1547

Which of the following lipids stores the most energy in the fatty acid chains?

- A) polyunsaturated fatty acid
- B) saturated fatty acid
- C) monounsaturated fatty acid
- D) glycerol

Answer: <https://biology-forums.com/index.php?topic=498337>

Question 1548

Identify the type of solution into which this cell has been placed.

- A) hypotonic
- B) hypertonic
- C) isotonic
- D) a solution with equal solute concentration as the cell

Answer: <https://biology-forums.com/index.php?topic=498413>

Question 1549

Which hormone has an anorexigenic effect on appetite?

- A) leptin
- B) neuropeptide Y
- C) ghrelin
- D) orexins

Answer: <https://biology-forums.com/index.php?topic=501816>

Question 1550

What determines the hydrostatic pressure of a solution?

- A) Hydrostatic pressure is the force that fluids exert.
- B) Hydrostatic pressure is created by the number of solute particles present in solution.
- C) Hydrostatic pressure is the force that proteins exert.
- D) Hydrostatic pressure is created by the number of proteins present in solution.

Answer: <https://biology-forums.com/index.php?topic=502001>

Question 1551

At what point in life does spermatogenesis begin in a male?

- A) before birth
- B) birth
- C) childhood
- D) puberty

Answer: <https://biology-forums.com/index.php?topic=511212>

Question 1552

The first portion of the large intestine is the:

- A) rectum.
- B) transverse colon.
- C) ascending colon.

D) cecum.

Answer: <https://biology-forums.com/index.php?topic=501688>

Question 1553

Summation that results from the cumulative effect of multiple synapses at multiple places on the neuron is designated:

- A) temporal summation.
- B) hyperpolarization.
- C) spatial summation.
- D) impulse transmission.

Answer: <https://biology-forums.com/index.php?topic=500451>

Question 1554

Which of the following does NOT belong to the brachial plexus?

- A) musculocutaneous nerve
- B) median nerve
- C) phrenic nerve
- D) ulnar nerve

Answer: <https://biology-forums.com/index.php?topic=500649>

Question 1555

Why is cholesterol a critical component of the plasma membrane?

- A) Cholesterol serves a role in cell recognition.
- B) Cholesterol transports certain molecules into the cell.
- C) Cholesterol catalyzes metabolic reactions from its position within the plasma membrane.
- D) Cholesterol stabilizes the structure of the plasma membrane when the temperature changes.

Answer: <https://biology-forums.com/index.php?topic=498401>

Question 1556

Determine the fiber type in which propagation of an action potential will occur most quickly.

- A) myelinated type A fiber
- B) unmyelinated type B fiber
- C) myelinated type B fiber
- D) type C fiber

Answer: <https://biology-forums.com/index.php?topic=500436>

Question 1557

Semen is expelled from the body during:

- A) fertilization.
- B) erection.
- C) ejaculation.
- D) coagulation.

Answer: <https://biology-forums.com/index.php?topic=511197>

Question 1558

The levator ani inserts on the:

- A) iliac crest.
- B) coccyx.
- C) ischial spine.
- D) sacrum.

Answer: <https://biology-forums.com/index.php?topic=500220>

Question 1559

The spinal cord lacks a portion of the dura mater known as the:

- A) epidural space.
- B) periosteal layer.
- C) subdural space.
- D) meningeal layer.

Answer: <https://biology-forums.com/index.php?topic=500543>

Question 1560

The increase in muscle tension that is produced by increasing the number of active motor units is called:

- A) recruitment.
- B) isotonic contraction.
- C) muscle tone.
- D) wave summation.

Answer: <https://biology-forums.com/index.php?topic=500333>

Question 1561

What is NOT a function of the peroxisome?

- A) oxidize toxic substances
- B) protein synthesis
- C) break down fatty acids
- D) synthesize certain phospholipids

Answer: <https://biology-forums.com/index.php?topic=498425>

Question 1562

How many spermatids result from one spermatogonium?

- A) 2
- B) 4
- C) 8
- D) 16

Answer: <https://biology-forums.com/index.php?topic=511201>

Question 1563

During a boxing match, Sammy was hit on the side of the neck. He stopped breathing temporarily due to damage to the:

- A) cervical plexus.
- B) sacral plexus.
- C) brachial plexus.
- D) lumbar plexus.

Answer: <https://biology-forums.com/index.php?topic=500646>

Question 1564

Discuss the influence of cholecystokinin (CCK) and secretin on the acinar cells of the pancreas.

Answer: <https://biology-forums.com/index.php?topic=501748>

Question 1565

A birth defect known as spina bifida results from the incomplete closure of the embryonic neural tube. Which germ layer is affected?

- A) endoderm
- B) ectoderm
- C) myotome
- D) mesoderm

Answer: <https://biology-forums.com/index.php?topic=511328>

Question 1566

Which of the following organs contains target cells for oxytocin?

- A) kidneys
- B) lungs
- C) mammary glands
- D) bones

Answer: <https://biology-forums.com/index.php?topic=500965>

Question 1567

In the case of blood types, both alleles A and B may be expressed as the phenotype. This exemplifies:

- A) codominance.
- B) incomplete dominance.
- C) polygenic inheritance.
- D) sex-linked inheritance.

Answer: <https://biology-forums.com/index.php?topic=511373>

Question 1568

Explain how megakaryocytes form platelets.

Answer: <https://biology-forums.com/index.php?topic=501382>

Question 1569

What cells are categorized as agranulocytes?

- A) neutrophils and basophils
- B) lymphocytes and monocytes
- C) reticulocytes and erythrocytes
- D) eosinophils and basophils

Answer: <https://biology-forums.com/index.php?topic=501329>

Question 1570

Describe the role of the mitotic spindle during mitosis.

Answer: <https://biology-forums.com/index.php?topic=498485>

Question 1571

The process of filtration occurs at the:

- A) proximal tubule.
- B) renal corpuscle.
- C) distal tubule.
- D) collecting duct.

Answer: <https://biology-forums.com/index.php?topic=501903>

Question 1572

What movement decreases the angle between the foot and tibia as the toes are pulled up toward the head?

- A) plantar flexion
- B) pronation
- C) dorsiflexion
- D) inversion

Answer: <https://biology-forums.com/index.php?topic=499004>

Question 1573

When do the extraembryonic membranes form?

- A) second week of development
- B) fifth week of development
- C) eighth week of development
- D) tenth week of development

Answer: <https://biology-forums.com/index.php?topic=511310>

Question 1574

Striated, multinucleate cells are commonly found in:

- A) skeletal muscle tissue.
- B) cardiac muscle tissue.
- C) smooth muscle tissue.
- D) both smooth and cardiac muscle tissue.

Answer: <https://biology-forums.com/index.php?topic=498591>

Question 1575

An electrocardiogram (ECG) shows extra P waves. Determine and discuss the part of the conduction pathway that is not working.

Answer: <https://biology-forums.com/index.php?topic=501188>

Question 1576

Bilirubin comes from the breakdown of:

- A) globin chains of hemoglobin.
- B) amino acids of hemoglobin.
- C) heme molecules of hemoglobin that lack iron.

D) iron ions found in hemoglobin molecules.

Answer: <https://biology-forums.com/index.php?topic=501325>

Question 1577

Which muscle assists with smiling?

- A) buccinator
- B) zygomaticus major
- C) orbicularis oculi
- D) depressor anguli oris

Answer: <https://biology-forums.com/index.php?topic=500200>

Question 1578

Under what conditions will the myogenic mechanism slow blood flow into a capillary bed?

- A) rising hydrogen ion levels
- B) rising arteriolar pressure
- C) dropping arteriole pressure
- D) rising carbon dioxide levels

Answer: <https://biology-forums.com/index.php?topic=501232>

Question 1579

The degree to which a muscle cell can stretch depends on its:

- A) excitability.
- B) contractility.
- C) extensibility.
- D) conductivity.

Answer: <https://biology-forums.com/index.php?topic=500289>

Question 1580

Hydrochloric acid is a:

- A) hydrogen ion donor.
- B) hydrogen ion acceptor.
- C) hydroxide ion donor.
- D) proton acceptor.

Answer: <https://biology-forums.com/index.php?topic=498315>

Question 1581

Which nervous system promotes increased peripheral resistance and increased blood pressure through the vasoconstriction of systemic arterioles?

- A) sympathetic nervous system
- B) sensory nervous system
- C) parasympathetic nervous system
- D) somatic nervous system

Answer: <https://biology-forums.com/index.php?topic=501219>

Question 1582

Oxidative deamination of a glutamate molecule produces ammonia.

Answer: <https://biology-forums.com/index.php?topic=501846>

Question 1583

Which of the following is NOT a functional joint classification?

- A) amphiarthrosis
- B) synarthrosis
- C) diarthrosis
- D) synovial

Answer: <https://biology-forums.com/index.php?topic=498962>

Question 1584

What forms the majority of blood?

- A) plasma
- B) platelets

- C) buffy coat
- D) leukocytes

Answer: <https://biology-forums.com/index.php?topic=501301>

Question 1585

Cells that help regulate the immune response are:

- A) major histocompatibility complex (MHC) molecules.
- B) cytotoxic T (TC) cells.
- C) CD8 cells.
- D) helper T (TH) cells.

Answer: <https://biology-forums.com/index.php?topic=501439>

Question 1586

Cytosol is also known as:

- A) intracellular fluid (ICF).
- B) blood plasma.
- C) the cytoskeleton.
- D) extracellular fluid (ECF).

Answer: <https://biology-forums.com/index.php?topic=498395>

Question 1587

Endolymph travels within the membranous labyrinth while perilymph travels between the bony and membranous labyrinth.

Answer: <https://biology-forums.com/index.php?topic=500912>

Question 1588

Ashley lost the labels to her microscope slides and can no longer tell the difference between the two. Explain how she should distinguish a slide of the epithelium lining the esophagus from a slide of the epithelium lining the small intestine.

Answer: <https://biology-forums.com/index.php?topic=498642>

Question 1589

Since her stomach was removed, Mrs. Lopez has the most difficulty initiating digestion of:

- A) oligosaccharides.
- B) proteins.
- C) lipids.
- D) monosaccharides.

Answer: <https://biology-forums.com/index.php?topic=501715>

Question 1590

Ella sweats out fluids on a hot, dry day without realizing she is losing heat and fluids insensibly. Determine what Ella experiences when sweating.

- A) convection
- B) evaporation
- C) conduction
- D) radiation

Answer: <https://biology-forums.com/index.php?topic=501820>

Question 1591

Explain semiconservative replication as it relates to DNA synthesis.

Answer: <https://biology-forums.com/index.php?topic=498484>

Question 1592

The bending of stereocilia depolarizes or hyperpolarizes hair cells within the utricle and saccule and promote a sensation of:

- A) sound.
- B) spinning in a circle.
- C) turning of the head to the left or right.
- D) linear movement of the head.

Answer: <https://biology-forums.com/index.php?topic=500895>

Question 1593

The hand is also known as the:

- A) plantar region.
- B) pedal region.
- C) manual region.
- D) acromial region.

Answer: <https://biology-forums.com/index.php?topic=498189>

Question 1594

Aquaporins may be employed during:

- A) osmosis.
- B) simple diffusion.
- C) endocytosis.
- D) active transport.

Answer: <https://biology-forums.com/index.php?topic=498408>

Question 1595

When you soak dirty dishes in your kitchen sink, you allow the water to break apart the bonds of the food stuck to your plates. This type of reaction is known as:

- A) anabolism.
- B) hydrolysis.
- C) neutralization.
- D) dehydration synthesis.

Answer: <https://biology-forums.com/index.php?topic=498331>

Question 1596

Neurotransmitters can be either excitatory or inhibitory depending upon the receptor present on the postsynaptic neuron.

Answer: <https://biology-forums.com/index.php?topic=500473>

Question 1597

Which hormone increases acid secretion by the stomach?

- A) gastrin
- B) gastric-inhibitory peptide (GIP)
- C) somatostatin
- D) secretin

Answer: <https://biology-forums.com/index.php?topic=501676>

Question 1598

What membrane potential must generally be met in order to achieve threshold?

- A) -85 mV
- B) -70 mV
- C) -55 mV
- D) -30 mV

Answer: <https://biology-forums.com/index.php?topic=500425>

Question 1599

What ion concentration is linked to calcium ion concentration and regulated by vitamin D3 (calcitriol)?

- A) potassium ions
- B) fluorine ions
- C) sodium ions
- D) phosphate ions

Answer: <https://biology-forums.com/index.php?topic=502035>

Question 1600

The internal anal sphincter is controlled involuntarily while the external anal sphincter is controlled voluntarily.

Answer: <https://biology-forums.com/index.php?topic=501732>

Question 1601

Heat is exchanged between the body and the environment by all of the following mechanisms EXCEPT:

- A) radiation.
- B) precipitation.

- C) evaporation.
- D) convection.

Answer: <https://biology-forums.com/index.php?topic=501819>

Question 1602

Whose bone marrow is mostly red?

- A) middle-aged adults
- B) young adults
- C) elderly
- D) infants

Answer: <https://biology-forums.com/index.php?topic=498755>

Question 1603

Which item listed below is probably irrelevant (or poor) advice if you are trying to begin a credit record?

- A) Open a checking or savings account.
- B) Have a telephone installed.
- C) Qualify for a small installment loan.
- D) Establish a record of paying all bills promptly with cash.

Answer: <https://biology-forums.com/index.php?topic=503668>

Question 1604

The partial pressure of carbon dioxide in the blood of pulmonary capillaries is approximately:

- A) 35 mm Hg.
- B) 45 mm Hg.
- C) 50 mm Hg.
- D) 70 mm Hg.

Answer: <https://biology-forums.com/index.php?topic=501579>

Question 1605

What is hypercapnia and how does it affect respiration?

Answer: <https://biology-forums.com/index.php?topic=501640>

Question 1606

When sound waves bend stereocilia, what happens?

- A) Hearing loss results.
- B) Hair cells hyperpolarize as potassium flows into the cell through open channels.
- C) Hair cells depolarize, releasing neurotransmitter, and triggering an action potential.
- D) The force of the sound waves is converted into mechanical energy.

Answer: <https://biology-forums.com/index.php?topic=500889>

Question 1607

Active transport processes:

- A) require cells to expend energy (ATP).
- B) move solutes with or along their concentration gradients.
- C) move solutes through the phospholipid bilayer without the use of integral proteins.
- D) move solutes from a higher concentration to a lower concentration.

Answer: <https://biology-forums.com/index.php?topic=498415>

Question 1608

The patella is classified as a sesamoid bone since it:

- A) has a diaphysis and epiphyses.
- B) is longer than it is wide.
- C) is located within tendons.
- D) has an irregular shape.

Answer: <https://biology-forums.com/index.php?topic=498748>

Question 1609

Nervous tissue is unique because it completely lacks an ECM.

Answer: <https://biology-forums.com/index.php?topic=498638>

Question 1610

Which layer of the epidermis is characterized by prominent cytoplasmic granules in the cells?

- A) stratum corneum
- B) stratum granulosum
- C) stratum lucidum
- D) stratum spinosum

Answer: <https://biology-forums.com/index.php?topic=498668>

Question 1611

The masseter and temporalis muscles provide much of the force for:

- A) frowning.
- B) chewing.
- C) smiling.
- D) swallowing.

Answer: <https://biology-forums.com/index.php?topic=500209>

Question 1612

The neurotransmitter orexin plays a role in:

- A) the promotion of wakefulness.
- B) the promotion of sleepiness.
- C) the regulation of metabolism.
- D) body temperature regulation.

Answer: <https://biology-forums.com/index.php?topic=500569>

Question 1613

Eccrine glands produce:

- A) cerumen.
- B) sebum.
- C) sweat containing mostly water.
- D) hormones.

Answer: <https://biology-forums.com/index.php?topic=498698>

Question 1614

Which of the following is controlled by the somatic motor division?

- A) cardiac muscle
- B) skeletal muscle
- C) glands
- D) smooth muscle

Answer: <https://biology-forums.com/index.php?topic=500395>

Question 1615

Explain where sodium and potassium ions are relative to a muscle cell during resting membrane potential.

Answer: <https://biology-forums.com/index.php?topic=500350>

Question 1616

Determine why antihistamine medications can be effective treatments against the inflammatory response.

Answer: <https://biology-forums.com/index.php?topic=501528>

Question 1617

Which of the following is an inherited trait influenced by multiple alleles?

- A) color blindness
- B) sickle cell anemia
- C) ABO blood types
- D) skin color

Answer: <https://biology-forums.com/index.php?topic=511371>

Question 1618

Describe the synaptic cleft.

Answer: <https://biology-forums.com/index.php?topic=500352>

Question 1619

How do most circular muscles function?

- A) levers
- B) breathing
- C) sphincters
- D) swallowing

Answer: <https://biology-forums.com/index.php?topic=500187>

Question 1620

Which of the following persists for life?

- A) epiphyseal plate
- B) primary bone
- C) articular cartilage
- D) primary ossification center

Answer: <https://biology-forums.com/index.php?topic=498778>

Question 1621

A patient has been experiencing prolonged vomiting. Since she has lost many hydrogen ions, you predict her acid-base imbalance to be:

- A) respiratory acidosis.
- B) respiratory alkalosis.
- C) metabolic acidosis.
- D) metabolic alkalosis.

Answer: <https://biology-forums.com/index.php?topic=511140>

Question 1622

What secretes the aqueous humor?

- A) vitreous humor
- B) ciliary body
- C) iris
- D) lens

Answer: <https://biology-forums.com/index.php?topic=500855>

Question 1623

The products of glycogenolysis are the same as the reactants of:

- A) glycolysis.
- B) gluconeogenesis.
- C) lipolysis.
- D) glycogenesis.

Answer: <https://biology-forums.com/index.php?topic=501804>

Question 1624

Spermiogenesis begins with a _____ and ends with a _____.

- A) sperm, spermatid
- B) primary spermatocyte, secondary spermatocyte
- C) spermatid, sperm
- D) spermatogonium, spermatid

Answer: <https://biology-forums.com/index.php?topic=511202>

Question 1625

Which hormone has NO role in potassium ion regulation?

- A) aldosterone
- B) parathyroid hormone (PTH)
- C) epinephrine
- D) insulin

Answer: <https://biology-forums.com/index.php?topic=502027>

Question 1626

Madison wants to give a kidney to her older sister. What type of organ transplant will this be?

- A) autograft
- B) isograft
- C) allograft
- D) xenograft

Answer: <https://biology-forums.com/index.php?topic=501441>

Question 1627

Place these vessels in the correct order as blood flows into and through the kidney.

1. afferent arteriole
2. arcuate artery
3. efferent arteriole
4. glomerulus
5. interlobar artery
6. interlobular (cortical radiate) artery
7. renal artery
8. segmental artery

- A) 7, 8, 5, 2, 6, 1, 4, 3
- B) 7, 8, 6, 2, 5, 1, 5, 3
- C) 7, 8, 2, 5, 6, 3, 4, 1
- D) 7, 5, 8, 6, 2, 4, 3, 1

Answer: <https://biology-forums.com/index.php?topic=501891>

Question 1628

Gulf War Illness (GWI) is the name of a combination of symptoms experienced by veterans of the Gulf War in the early 1990s. For undetermined causes, some veterans have lesions, or damage, to the prefrontal cortex of the cerebrum. Predict what higher mental functions may be affected when the prefrontal cortex is damaged.

Answer: <https://biology-forums.com/index.php?topic=500620>

Question 1629

The Apgar score is assigned for several criteria measured at birth. What is NOT measured?

- A) grimace
- B) defecation
- C) respiratory level
- D) muscle activity

Answer: <https://biology-forums.com/index.php?topic=511364>

Question 1630

Which of the following is NOT a location where a hinge joint is found?

- A) shoulder
- B) elbow
- C) knee
- D) interphalangeal joints of the fingers and toes

Answer: <https://biology-forums.com/index.php?topic=499016>

Question 1631

The right and left coronary arteries receive blood from the:

- A) aorta.
- B) pulmonary trunk.
- C) superior vena cava.
- D) coronary sinus.

Answer: <https://biology-forums.com/index.php?topic=501085>

Question 1632

The P wave on an electrocardiogram (ECG) represents the depolarization of cells in the:

- A) atrioventricular (AV) node.
- B) sinoatrial (SA) node.
- C) atria.
- D) ventricles.

Answer: <https://biology-forums.com/index.php?topic=501122>

Question 1633

Where are the ganglia of the parasympathetic nervous system located?

- A) close to the brain
- B) near the cells or organ being innervated by parasympathetic postganglionic neurons
- C) close to the spinal cord
- D) near the parasympathetic preganglionic neuron

Answer: <https://biology-forums.com/index.php?topic=500775>

Question 1634

Discuss the structure of fibrous joints.

Answer: <https://biology-forums.com/index.php?topic=499043>

Question 1635

The azygos system collects blood from the:

- A) abdominopelvic cavity.
- B) superior thoracic cavity.
- C) anterior thoracic and abdominal walls.
- D) posterior thoracic and abdominal walls.

Answer: <https://biology-forums.com/index.php?topic=501256>

Question 1636

An electrically neutral atom with an atomic number of 8 and a mass number of 17 has:

- A) 8 protons.
- B) 9 electrons.
- C) 8 neutrons.
- D) 17 protons.

Answer: <https://biology-forums.com/index.php?topic=498276>

Question 1637

The adrenal medulla serve to supplement the:

- A) somatic nervous system.
- B) parasympathetic nervous system.
- C) sympathetic nervous system.
- D) both the sympathetic and parasympathetic nervous systems.

Answer: <https://biology-forums.com/index.php?topic=500764>

Question 1638

Explain the three places where a preganglionic sympathetic neuron may synapse with a postganglionic sympathetic neuron.

Answer: <https://biology-forums.com/index.php?topic=500809>

Question 1639

Vaccinations involve exposure to an antigen to elicit:

- A) passive immunity.
- B) a primary immune response.
- C) severe allergic reaction.
- D) a secondary immune response.

Answer: <https://biology-forums.com/index.php?topic=501476>

Question 1640

Why are damaged neurons usually not replaced?

- A) Neurons are excitable cells.
- B) Neurons are amitotic.
- C) Neurons are supported by neuroglial cells.
- D) Neurons are voluntarily controlled by the brain.

Answer: <https://biology-forums.com/index.php?topic=498597>

Question 1641

What property of water helps keep body temperature stabilized?

- A) polarity
- B) universal solvent
- C) surface tension
- D) heat capacity

Answer: <https://biology-forums.com/index.php?topic=498309>

Question 1642

An elderly man, Mr. Gee, is unable to maintain an erection. Classify his condition.

- A) resolution
- B) flaccid
- C) impotence
- D) refractory period

Answer: <https://biology-forums.com/index.php?topic=511211>

Question 1643

Summarize the important points of meiosis I and II.

Answer: <https://biology-forums.com/index.php?topic=511268>

Question 1644

Which of the following is NOT a major job of the digestive system?

- A) ingestion of vitamins and minerals
- B) manufacturing blood cells
- C) fluid and electrolyte homeostasis
- D) acid-base homeostasis

Answer: <https://biology-forums.com/index.php?topic=501644>

Question 1645

What secondary brain vesicles form from the forebrain?

- A) metencephalon and mesencephalon
- B) telencephalon and metencephalon
- C) metencephalon and myelencephalon
- D) diencephalon and telencephalon

Answer: <https://biology-forums.com/index.php?topic=500506>

Question 1646

What element is necessary for the production of triiodothyronine (T3) and thyroxine (T4)?

- A) magnesium
- B) potassium
- C) calcium
- D) iodine

Answer: <https://biology-forums.com/index.php?topic=500979>

Question 1647

Which of the following would NOT be a component of the plasma membrane?

- A) cytoskeleton
- B) glycoproteins
- C) phospholipids
- D) cholesterol

Answer: <https://biology-forums.com/index.php?topic=498399>

Question 1648

Which of the following is an example of a synchondrosis?

- A) an epiphyseal plate found between the shaft (diaphysis) and the end (epiphysis) of a long bone
- B) an intervertebral disc situated between the vertebrae of the spinal column
- C) the pubic symphysis and the two surrounding pubic bones of the pelvic girdle
- D) the coronal suture situated between the frontal bone and parietal bone

Answer: <https://biology-forums.com/index.php?topic=498977>

Question 1649

Discuss edema and some causes of edema.

Answer: <https://biology-forums.com/index.php?topic=511167>

Question 1650

From deep to superficial, what is the correct order of the layers of the epidermis?

- A) stratum corneum, stratum spinosum, stratum lucidum, stratum granulosum, stratum basale
- B) stratum basale, stratum granulosum, stratum spinosum, stratum lucidum, stratum corneum
- C) stratum lucidum, stratum corneum, stratum spinosum, stratum basale, stratum granulosum
- D) stratum basale, stratum spinosum, stratum granulosum, stratum lucidum, stratum corneum

Answer: <https://biology-forums.com/index.php?topic=498663>

Question 1651

What type of plasma protein are antibodies?

- A) transport protein
- B) immune protein
- C) lipoprotein
- D) clotting protein

Answer: <https://biology-forums.com/index.php?topic=501312>

Question 1652

What major organs are housed in the thoracic cavity?

- A) lungs, heart, esophagus, trachea
- B) stomach, intestines, liver, pancreas
- C) urinary bladder, reproductive organs
- D) brain and spinal cord

Answer: <https://biology-forums.com/index.php?topic=498193>

Question 1653

Which statement regarding the smooth endoplasmic reticulum (SER) is FALSE?

- A) The SER manufactures proteins for export from the cell.
- B) The SER detoxifies drugs and harmful substances ingested by and produced in the body.
- C) The SER stores calcium ions.
- D) The SER synthesizes the majority of the lipid components of the plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=498427>

Question 1654

What does thyrotropin-releasing hormone target?

- A) anterior pituitary (adenohypophysis)
- B) hypothalamus
- C) posterior pituitary (neurohypophysis)
- D) thyroid gland

Answer: <https://biology-forums.com/index.php?topic=500968>

Question 1655

Determine the product formed when hydrogen ions from a strong acid are accepted by the bicarbonate ion.

- A) sodium bicarbonate
- B) carbonic acid
- C) sodium hydroxide
- D) hydrochloric acid

Answer: <https://biology-forums.com/index.php?topic=502042>

Question 1656

Kim shut her finger in her car door. Her fingernail turned black, fell off, and did not regrow. What part of her nail was damaged? Why did her fingernail not grow back?

Answer: <https://biology-forums.com/index.php?topic=498737>

Question 1657

Predict the effects of hypocalcemia (low blood calcium ion levels) on the strength and length of contraction in a contractile cell.

Answer: <https://biology-forums.com/index.php?topic=501176>

Question 1658

Explain how the hypothalamic-pituitary-gonadal (HPG) axis is involved in testosterone production in males.

Answer: <https://biology-forums.com/index.php?topic=511273>

Question 1659

Summarize the secondary male sex characteristics that develop primarily at puberty.

Answer: <https://biology-forums.com/index.php?topic=511288>

Question 1660

Which blood vessel tunic is innervated by nerves from the sympathetic nervous system?

- A) tunica adventitia
- B) tunica intima
- C) tunica media
- D) tunica externa

Answer: <https://biology-forums.com/index.php?topic=501194>

Question 1661

The same _____ can have different effects depending on the properties of the _____.

- A) neurotransmitter; receptor
- B) hormone; neurotransmitter
- C) receptor; neurotransmitter
- D) substrate; enzyme

Answer: <https://biology-forums.com/index.php?topic=500452>

Question 1662

When climbing stairs, the gluteus maximus and hamstring group muscles work as antagonists.

Answer: <https://biology-forums.com/index.php?topic=500262>

Question 1663

Where is simple columnar epithelium located?

- A) lining of the small intestine
- B) lining the esophagus
- C) lining of the nasal cavity
- D) forming the air sacs of the lungs

Answer: <https://biology-forums.com/index.php?topic=498566>

Question 1664

Which of the following is NOT a ligament associated with the knee joint?

- A) posterior cruciate ligament (PCL)
- B) anterior cruciate ligament (ACL)
- C) radial collateral ligament
- D) tibial collateral ligament

Answer: <https://biology-forums.com/index.php?topic=499023>

Question 1665

Blockage to the mammary ducts of the mammary gland prevents the passage of:

- A) sperm.
- B) mucus.
- C) milk.
- D) sweat.

Answer: <https://biology-forums.com/index.php?topic=511226>

Question 1666

A substance moves by facilitated diffusion into a cell. What is required for its transport?

- A) neither ATP nor a protein channel
- B) ATP
- C) ATP and a protein channel
- D) protein channel

Answer: <https://biology-forums.com/index.php?topic=498406>

Question 1667

Due to an accident on the playground, Kayleigh wears a cast to immobilize her elbow. What functional class of joint does this immobilization resemble?

- A) diarthrosis
- B) synarthrosis
- C) cartilaginous
- D) amphiarthrosis

Answer: <https://biology-forums.com/index.php?topic=498964>

Question 1668

Discuss the impact of frontal lobe damage on sensation.

Answer: <https://biology-forums.com/index.php?topic=500939>

Question 1669

Some rat poisons contain a toxin that block's the liver's ability to utilize vitamin K. Animals that consume this poison would have problems with:

- A) agglutination.
- B) erythropoiesis.
- C) coagulation.
- D) thrombolysis.

Answer: <https://biology-forums.com/index.php?topic=501348>

Question 1670

Damage to the external iliac artery will affect delivery of blood to the:

- A) abdominal organs.
- B) lower limb.
- C) upper limb.
- D) brain.

Answer: <https://biology-forums.com/index.php?topic=501252>

Question 1671

Regions of skin supplied by a spinal nerve for somatic sensation are known as:

- A) lines of cleavage.
- B) the rule of nines.
- C) dermatomes.
- D) the ABCDE rule.

Answer: <https://biology-forums.com/index.php?topic=500667>

Question 1672

Select the blood pH that represents acidosis.

- A) 7.24
- B) 7.37
- C) 7.42
- D) 7.58

Answer: <https://biology-forums.com/index.php?topic=511133>

Question 1673

What external covering protects the kidney from physical shock?

- A) renal fascia
- B) renal capsule
- C) renal pelvis
- D) adipose capsule

Answer: <https://biology-forums.com/index.php?topic=501883>

Question 1674

Outline the three-step sequence of a reflex arc.

Answer: <https://biology-forums.com/index.php?topic=500721>

Question 1675

Explain the changes in progesterone production that occur when fertilization does occur and when fertilization does not occur.

Answer: <https://biology-forums.com/index.php?topic=511280>

Question 1676

What part of an antibody is responsible for antigen recognition and binding?

- A) constant (C) region
- B) heavy (H) chains
- C) variable (V) regions
- D) light (L) chains

Answer: <https://biology-forums.com/index.php?topic=501449>

Question 1677

A splinter penetrated into the skin on the palmar surface of the hand. The splinter nearly reached stratum basale of the epidermis. What is the final layer injured by this splinter?

- A) stratum lucidum of the epidermis
- B) stratum corneum of the epidermis
- C) stratum spinosum of the epidermis
- D) stratum granulosum of the epidermis

Answer: <https://biology-forums.com/index.php?topic=498665>

Question 1678

Pleurisy is the inflammation of the serous membranes surrounding the lungs. With pleurisy, the inflamed membranes may secrete more serous fluid than normal. Predict the effects of excess serous fluid on serous membrane function.

Answer: <https://biology-forums.com/index.php?topic=498271>

Question 1679

All taste sensations begin with the entry of hydrogen ions into a gustatory cell.

Answer: <https://biology-forums.com/index.php?topic=500903>

Question 1680

Discuss the two fluid compartments and the percentage of water each compartment contributes to total body water.

Answer: <https://biology-forums.com/index.php?topic=511161>

Question 1681

Glucose, galactose, and fructose have the molecular formula $C_6H_{12}O_6$ but have different arrangements of atoms. These sugars are:

- A) isomers.
- B) disaccharides.
- C) isotopes.
- D) polysaccharides.

Answer: <https://biology-forums.com/index.php?topic=498335>

Question 1682

The round ligaments connect each ovary to the uterus and receive an oocyte during ovulation.

Answer: <https://biology-forums.com/index.php?topic=511261>

Question 1683

The optic disc is known as the blind spot because:

- A) only cones populate the optic disc.
- B) photoreceptors are absent from the optic disc.
- C) the fovea centralis prevents light from striking the optic disc.
- D) only rods populate the optic disc.

Answer: <https://biology-forums.com/index.php?topic=500853>

Question 1684

The myogenic mechanism acts to restore glomerular filtration rate (GFR) by changing:

- A) tubular secretion of metabolic wastes.

- B) vessel diameter.
- C) blood pH.
- D) blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501919>

Question 1685

Predict the effect on net filtration pressure if capsular hydrostatic pressure (CHP) was increased above normal.

Answer: <https://biology-forums.com/index.php?topic=501960>

Question 1686

What does thyroid-stimulating hormone (TSH) target?

- A) anterior pituitary (adenohypophysis)
- B) posterior pituitary (neurohypophysis)
- C) hypothalamus
- D) thyroid gland

Answer: <https://biology-forums.com/index.php?topic=500969>

Question 1687

Which of the following best describes a bipolar neuron?

- A) one axon and multiple, highly branched dendrites
- B) one axon and one dendrite
- C) one axon that splits into two processes
- D) multiple axons and one dendrite

Answer: <https://biology-forums.com/index.php?topic=500405>

Question 1688

Which of the following does NOT characterize a reflex?

- A) A reflex is an automatic response to a stimulus.
- B) Neural integration of a reflex usually occurs in the PNS.
- C) Reflexes require a stimulus to initiate a motor response.
- D) The motor response to a stimulus is rapid.

Answer: <https://biology-forums.com/index.php?topic=500676>

Question 1689

What connects the upper motor neurons to lower motor neurons?

- A) primary afferent neuron
- B) sensory neurons
- C) interneurons
- D) muscle fibers

Answer: <https://biology-forums.com/index.php?topic=500671>

Question 1690

Where are sound vibrations amplified?

- A) semicircular canals
- B) tympanic membrane
- C) auditory ossicles
- D) vestibule

Answer: <https://biology-forums.com/index.php?topic=500886>

Question 1691

Chorionic villus sampling (CVS) may be performed early in pregnancy to find certain problems with the fetus. Determine and describe the extraembryonic membrane that is being sampled.

Answer: <https://biology-forums.com/index.php?topic=511413>

Question 1692

Which letter represents the zygomatic bone on this figure?

- A) A
- B) B
- C) C

D) D

Answer: <https://biology-forums.com/index.php?topic=498872>

Question 1693

What two glands are associated with the diencephalon? What are their functions?

Answer: <https://biology-forums.com/index.php?topic=500600>

Question 1694

Which hormones work synergistically to retain water?

- A) aldosterone and atrial natriuretic peptide (ANP)
- B) antidiuretic hormone (ADH) and aldosterone
- C) aldosterone and cortisol
- D) atrial natriuretic peptide (ANP) and antidiuretic hormone (ADH)

Answer: <https://biology-forums.com/index.php?topic=501025>

Question 1695

High levels of testosterone inhibit the release of:

- A) corticotropin-releasing hormone (CRH).
- B) growth hormone-releasing hormone (GHRH).
- C) thyrotropin-releasing hormone (TRH).
- D) gonadotropin-releasing hormone (GnRH).

Answer: <https://biology-forums.com/index.php?topic=501019>

Question 1696

List the three main structures associated with the nucleus.

Answer: <https://biology-forums.com/index.php?topic=498479>

Question 1697

Which of the following bones does NOT house a paranasal sinus?

- A) ethmoid bone
- B) maxilla
- C) sphenoid bone
- D) nasal bone

Answer: <https://biology-forums.com/index.php?topic=498874>

Question 1698

During which stage of labor does the fetal head crown?

- A) placental
- B) expulsion
- C) dilation
- D) effacement

Answer: <https://biology-forums.com/index.php?topic=511360>

Question 1699

How are carpals and tarsals classified by shape?

- A) short bones
- B) long bones
- C) flat bones
- D) irregular bones

Answer: <https://biology-forums.com/index.php?topic=498744>

Question 1700

The right side of the heart receives:

- A) oxygenated blood from the systemic circuit.
- B) deoxygenated blood from the pulmonary circuit.
- C) deoxygenated blood from the systemic circuit.
- D) oxygenated blood from the pulmonary circuit.

Answer: <https://biology-forums.com/index.php?topic=501080>

Question 1701

Regeneration of neural tissue in the PNS is possible only if the neuron's cell body remains intact.

Answer: <https://biology-forums.com/index.php?topic=500466>

Question 1702

Explain how the gestation period differs from the prenatal period.

Answer: <https://biology-forums.com/index.php?topic=511395>

Question 1703

A mother breastfeeds her infant. As long as the baby suckles his mother's breast, the mother's mammary glands produce milk. Suckling, the stimulus, increases milk production, the response. This scenario is best described as:

- A) anatomical position.
- B) principle of complementarity of structure and function.
- C) a negative feedback loop.
- D) a positive feedback loop.

Answer: <https://biology-forums.com/index.php?topic=498210>

Question 1704

Heart rate can be determined by measuring the time between two successive R waves, known as the R-R interval.

Answer: <https://biology-forums.com/index.php?topic=501161>

Question 1705

As sound waves travel into the ear, they pass from the auditory canal to the:

- A) tympanic membrane, auditory ossicles, oval window, perilymph, scala vestibuli of the cochlea.
- B) tympanic membrane, auditory ossicles, round window, perilymph, scala vestibuli of the cochlea.
- C) tympanic membrane, oval window, auditory ossicles, perilymph, scala vestibuli of the cochlea.
- D) tympanic membrane, auditory ossicles, oval window, endolymph, scala vestibuli of the cochlea.

Answer: <https://biology-forums.com/index.php?topic=500885>

Question 1706

How does atrial natriuretic peptide (ANP) contribute to a decrease in blood volume and systemic blood pressure?

- A) ANP constricts the afferent arteriole and dilates the efferent arteriole.
- B) ANP dilates the afferent arteriole and constricts the efferent arteriole.
- C) ANP dilates both the afferent and efferent arterioles.
- D) ANP constricts both the afferent and efferent arterioles.

Answer: <https://biology-forums.com/index.php?topic=501927>

Question 1707

Explain why the citric acid cycle is called a cycle.

Answer: <https://biology-forums.com/index.php?topic=501861>

Question 1708

Select the appropriate pathway for the steps of hemostasis.

- A) vascular spasms, coagulation, platelet plug formation, clot retraction, thrombolysis
- B) platelet plug formation, vascular spasms, coagulation, clot retraction, thrombolysis
- C) vascular spasms, platelet plug formation, coagulation, clot retraction, thrombolysis
- D) vascular spasms, platelet plug formation, coagulation, thrombolysis, clot retraction

Answer: <https://biology-forums.com/index.php?topic=501344>

Question 1709

What stimulus initiates the defecation reflex?

- A) presence of acid in the stomach
- B) the stretch of the rectum
- C) pressure on the gastroesophageal sphincter
- D) release of secretin and cholecystokinin (CCK) by the small intestine

Answer: <https://biology-forums.com/index.php?topic=501696>

Question 1710

In anatomical position, the ulna is _____ to the radius.

- A) distal
- B) medial
- C) proximal
- D) lateral

Answer: <https://biology-forums.com/index.php?topic=498897>

Question 1711

Jill is blind and often uses braille to read her school assignments. What cell in the stratum basale of the epidermis helps her discriminate between the textured dots?

- A) keratinocyte
- B) melanocyte
- C) Merkel cell
- D) dendritic (Langerhans) cell

Answer: <https://biology-forums.com/index.php?topic=498670>

Question 1712

What does gastrulation accomplish?

- A) formation of the three germ layers
- B) differentiation of germ layers into organs and organ system
- C) formation of the primitive streak
- D) implantation of the blastocyst into the endometrium

Answer: <https://biology-forums.com/index.php?topic=511322>

Question 1713

Glomerular hydrostatic pressure (GHP) is largely determined by systemic blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501976>

Question 1714

Blood in the right atrium should travel next past the:

- A) tricuspid valve and into the right ventricle.
- B) mitral valve and into the left ventricle.
- C) pulmonary trunk to the pulmonary capillaries.
- D) pulmonary valve and into the pulmonary trunk.

Answer: <https://biology-forums.com/index.php?topic=501100>

Question 1715

Aldosterone triggers the secretion of potassium ions (and hydrogen ions) and reabsorption of sodium ions by the kidney.

Answer: <https://biology-forums.com/index.php?topic=511154>

Question 1716

Mr. Jones recently started taking a medication called an ACE inhibitor. He called his doctor's office to ask why this medicine makes him light-headed and dizzy and learned these are symptoms related to low blood pressure. Explain to Mr. Jones why the ACE inhibitor would cause low blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501985>

Question 1717

The prime mover of elbow flexion is biceps brachii.

Answer: <https://biology-forums.com/index.php?topic=500259>

Question 1718

Each secondary bronchus supplies air to a:

- A) lobule of the lung.
- B) bronchopulmonary segment.
- C) lobe of the lung.
- D) hilum.

Answer: <https://biology-forums.com/index.php?topic=501559>

Question 1719

Ben had most of his stomach removed in an attempt for drastic weight loss. He is at the greatest risk for:

- A) gastroesophageal reflux disease (GERD).
- B) pernicious anemia.
- C) dehydration.
- D) lactose intolerance.

Answer: <https://biology-forums.com/index.php?topic=501717>

Question 1720

The stoppage of bleeding is known as:

- A) thrombolysis.
- B) platelet plug formation.
- C) hemostasis.
- D) coagulation.

Answer: <https://biology-forums.com/index.php?topic=501343>

Question 1721

Twelve pairs of cranial nerves transmit information to and from the brain.

Answer: <https://biology-forums.com/index.php?topic=500690>

Question 1722

Explain the roles of the right side and left side of the heart as two separate pumps.

Answer: <https://biology-forums.com/index.php?topic=501167>

Question 1723

In the knee joint, the medial meniscus is:

- A) hyaline cartilage.
- B) fibrocartilage.
- C) elastic cartilage.
- D) dense regular collagenous connective tissue.

Answer: <https://biology-forums.com/index.php?topic=499020>

Question 1724

What condition accompanies overhydration, or hypotonic hydration?

- A) hyperglycemia
- B) hypoglycemia
- C) hyponatremia
- D) hypercalcemia

Answer: <https://biology-forums.com/index.php?topic=502017>

Question 1725

During what part of the action potential will calcium ions enter the contractile cell?

- A) rapid depolarization phase
- B) initial repolarization phase
- C) repolarization phase
- D) plateau phase

Answer: <https://biology-forums.com/index.php?topic=501108>

Question 1726

A patient is diagnosed with mesothelioma. This cancer affects the:

- A) serous membranes.
- B) synovial membranes.
- C) mucous membranes.
- D) cutaneous membranes.

Answer: <https://biology-forums.com/index.php?topic=498600>

Question 1727

The hypothalamus functions in:

- A) coordinating movement.
- B) regulating the autonomic nervous system.
- C) secreting a hormone called melatonin.
- D) sending information to the cerebral cortex.

Answer: <https://biology-forums.com/index.php?topic=500523>

Question 1728

A pregnant woman developed a condition of low amniotic fluid called oligohydramnios. Predict the impact on her developing embryo.

Answer: <https://biology-forums.com/index.php?topic=511399>

Question 1729

The rule of nines is used to distinguish the various types of skin cancers from one another.

Answer: <https://biology-forums.com/index.php?topic=498718>

Question 1730

The organ systems rudimentarily form during the:

- A) pre-embryonic period.
- B) embryonic period.
- C) fetal period.
- D) neo-natal period.

Answer: <https://biology-forums.com/index.php?topic=511298>

Question 1731

What primarily determines airway resistance in the respiratory passageways?

- A) elasticity of the lung tissues
- B) diameter of the conducting zone passageways
- C) presence of surfactant
- D) degree of alveolar surface tension

Answer: <https://biology-forums.com/index.php?topic=501568>

Question 1732

Which of the following is NOT one of the four major processes of respiration?

- A) oxygen-hemoglobin dissociation curve
- B) pulmonary ventilation
- C) pulmonary gas exchange
- D) gas transport

Answer: <https://biology-forums.com/index.php?topic=501593>

Question 1733

Identify the vertebral region.

Answer: <https://biology-forums.com/index.php?topic=498229>

Question 1734

Determine the type of tissue grafts that would be most unlikely to experience rejection and explain why.

Answer: <https://biology-forums.com/index.php?topic=501530>

Question 1735

The cuticle around a nail is the:

- A) eponychium.
- B) hyponychium.
- C) perionychium.
- D) lunula.

Answer: <https://biology-forums.com/index.php?topic=498695>

Question 1736

What ions flow along the electrochemical gradient back into the matrix to drive the work of ATP synthesis?

- A) bicarbonate
- B) hydrogen
- C) oxygen

D) iron

Answer: <https://biology-forums.com/index.php?topic=501785>

Question 1737

An astigmatism is an irregular curvature of the cornea or lens which causes rays of light to refract unevenly.

Answer: <https://biology-forums.com/index.php?topic=500909>

Question 1738

Which of the following is regulated by a positive feedback mechanism in females?

- A) implantation
- B) ovulation
- C) menstruation
- D) fertilization

Answer: <https://biology-forums.com/index.php?topic=511237>

Question 1739

Cancer cells:

- A) are indistinguishable from normal body cells.
- B) do not spread into other body tissues.
- C) have a slower mitotic rate than normal body cells.
- D) may exhibit metastasis.

Answer: <https://biology-forums.com/index.php?topic=498468>

Question 1740

The head and tail regions, ventral and dorsal regions, right and left sides are established by:

- A) the allantois.
- B) ingression.
- C) the primitive streak.
- D) the chorionic villi.

Answer: <https://biology-forums.com/index.php?topic=511316>

Question 1741

Heidi sustained damage to her spinal cord in a car accident. She has no difficulty moving her arm, but has lost some sensation in her arm. What part of her spinal cord must have been injured?

- A) corticospinal tract of spinal white matter
- B) posterior horn of spinal gray matter
- C) anterior horn of spinal gray matter
- D) lateral horn of spinal gray matter

Answer: <https://biology-forums.com/index.php?topic=500551>

Question 1742

What is the main job of the pharynx?

- A) secretion
- B) propulsion
- C) mechanical digestion
- D) absorption

Answer: <https://biology-forums.com/index.php?topic=501662>

Question 1743

When is the S1 heart sound heard?

- A) ventricular filling
- B) isovolumetric contraction phase
- C) ventricular ejection phase
- D) isovolumetric relaxation phase

Answer: <https://biology-forums.com/index.php?topic=501135>

Question 1744

What type of hormone can cross the plasma membrane to bind to a receptor in the cytosol or nucleus?

- A) hydrophilic hormones

- B) protein hormones
- C) hydrophobic hormones
- D) amine hormones

Answer: <https://biology-forums.com/index.php?topic=500948>

Question 1745

Explain the functions of the three types of folds found in the small intestine, from largest to smallest.

Answer: <https://biology-forums.com/index.php?topic=501744>

Question 1746

The bulk of carbon dioxide is carried chemically combined with the amino acids of hemoglobin as carbaminohemoglobin in the RBCs.

Answer: <https://biology-forums.com/index.php?topic=501635>

Question 1747

Which of the following is the inner part of a serous membrane that covers the lungs?

- A) visceral pleura
- B) lamina propria
- C) parietal pleura
- D) synovial membrane

Answer: <https://biology-forums.com/index.php?topic=498601>

Question 1748

Patients are always examined while they are standing in anatomical position.

Answer: <https://biology-forums.com/index.php?topic=498222>

Question 1749

Joints classifications are known as structural classifications when based on the degree of motion they allow.

Answer: <https://biology-forums.com/index.php?topic=499030>

Question 1750

The length of the cardiac action potential, at 200-300 msec, is dependent upon the:

- A) plateau phase.
- B) repolarization phase.
- C) rapid depolarization phase.
- D) initial repolarization phase.

Answer: <https://biology-forums.com/index.php?topic=501111>

Question 1751

How many lumbar vertebrae exist in the vertebral column?

- A) 5
- B) 7
- C) 12
- D) 33

Answer: <https://biology-forums.com/index.php?topic=498879>

Question 1752

When carbon dioxide enters the distal tubule of a nephron in the kidney and reacts with water, what is the destination of the resulting hydrogen ion?

- A) The hydrogen ions are transported into the filtrate.
- B) The hydrogen ions are reabsorbed.
- C) The hydrogen ions are moved back into the blood.
- D) The hydrogen ions are transported into the interstitial fluid.

Answer: <https://biology-forums.com/index.php?topic=511130>

Question 1753

The longest and largest nerve in the body belongs to the sacral plexus and is known as the:

- A) femoral nerve.
- B) common fibular nerve.
- C) axillary nerve.
- D) sciatic nerve.

Answer: <https://biology-forums.com/index.php?topic=500652>

Question 1754

The hypoglossal nerve (XII) and glossopharyngeal nerve (IX) are both involved in taste sensation.

Answer: <https://biology-forums.com/index.php?topic=500692>

Question 1755

Explain why we should avoid drinking large amounts of pure water over a short period of time when we are dehydrated.

Answer: <https://biology-forums.com/index.php?topic=511166>

Question 1756

Which circuit has the greatest resistance?

- A) venous circuit
- B) pulmonary circuit
- C) hepatic circuit
- D) systemic circuit

Answer: <https://biology-forums.com/index.php?topic=501205>

Question 1757

When menstruation has ceased for at least one year, what has occurred?

- A) puberty
- B) female climacteric, or menopause
- C) menarche
- D) male climacteric, or andropause

Answer: <https://biology-forums.com/index.php?topic=511242>

Question 1758

What structures are NOT present in a non-lactating female?

- A) lobules
- B) alveoli
- C) mammary ducts
- D) lobules

Answer: <https://biology-forums.com/index.php?topic=511227>

Question 1759

A centrifuged sample of blood shows 53% plasma, 1% buffy coat, and 46% erythrocytes. What percent of the blood is composed of leukocytes and platelets?

- A) 1%
- B) 46%
- C) 47%
- D) 53%

Answer: <https://biology-forums.com/index.php?topic=501305>

Question 1760

Which of the following is NOT true about tubular reabsorption?

- A) Tubular reabsorption is entirely a passive process.
- B) Tubular reabsorption occurs via paracellular or transcellular routes.
- C) Tubular reabsorption may involve hormonal control.
- D) Tubular reabsorption moves items from the filtrate into the blood.

Answer: <https://biology-forums.com/index.php?topic=501929>

Question 1761

Explain how hydrostatic pressure and colloid osmotic pressure are created.

Answer: <https://biology-forums.com/index.php?topic=501288>

Question 1762

Which of the following is an organ of the alimentary canal?

- A) pancreas
- B) esophagus

- C) spleen
- D) liver

Answer: <https://biology-forums.com/index.php?topic=501642>

Question 1763

Describe how hydrogen ion secretion is linked to bicarbonate ion reabsorption.

Answer: <https://biology-forums.com/index.php?topic=501964>

Question 1764

Ms. Carroll went to her doctor's office with pain in her right shoulder blade and learned she was having a gallbladder attack. You're not surprised to hear about the unusual location of her pain since it is known as:

- A) the receptive field.
- B) phantom limb pain.
- C) referred pain.
- D) chronic pain.

Answer: <https://biology-forums.com/index.php?topic=500668>

Question 1765

Which letter represents the sphenoid bone on this figure?

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=498861>

Question 1766

Explain the role of the chorion in formation of the embryonic part of the placenta.

Answer: <https://biology-forums.com/index.php?topic=511398>

Question 1767

Which of the following muscles is named for its shape?

- A) triceps brachii
- B) pronator quadratus
- C) vastus medialis
- D) levator scapulae

Answer: <https://biology-forums.com/index.php?topic=500184>

Question 1768

What determines the direction of respiratory gas movement?

- A) gas solubility in water
- B) partial pressure gradient
- C) temperature
- D) molecular weight of the gas molecule

Answer: <https://biology-forums.com/index.php?topic=501578>

Question 1769

Sjögren's syndrome is an autoimmune disorder in which the body's white blood cells attack and destroy exocrine glands, specifically the salivary glands. What could a patient with this syndrome expect?

- A) increased risk of dental cavities, or caries
- B) impaction of the wisdom teeth
- C) increased saliva production
- D) increased production of salivary amylase

Answer: <https://biology-forums.com/index.php?topic=501660>

Question 1770

Which of the following must occur first during hemostasis?

- A) formation of fibrin
- B) thrombolysis
- C) clot retraction

D) formation of thrombin

Answer: <https://biology-forums.com/index.php?topic=501350>

Question 1771

Discuss the contribution of vasodilation to the inflammatory response.

Answer: <https://biology-forums.com/index.php?topic=501513>

Question 1772

What reduces friction around the lungs as they expand and contract?

- A) mucus
- B) pleural fluid
- C) surfactant
- D) synovial fluid

Answer: <https://biology-forums.com/index.php?topic=501561>

Question 1773

You examine a tissue slide through the microscope and recognize one layer of cells that are mostly tall and elongated. You determine this tissue to be:

- A) simple cuboidal epithelium.
- B) simple columnar epithelium.
- C) simple squamous epithelium.
- D) stratified columnar epithelium.

Answer: <https://biology-forums.com/index.php?topic=498560>

Question 1774

What part of the eye controls the amount of light entering through the pupil?

- A) cornea
- B) sclera
- C) iris
- D) lens

Answer: <https://biology-forums.com/index.php?topic=500851>

Question 1775

The synapse of a motor neuron with a muscle fiber is known as the:

- A) neuromuscular junction.
- B) motor end plate.
- C) synaptic cleft.
- D) synaptic bulb.

Answer: <https://biology-forums.com/index.php?topic=500308>

Question 1776

The union of the muscles of the quadriceps femoris group forms the quadriceps tendon, which continues on to form the patellar ligament.

Answer: <https://biology-forums.com/index.php?topic=500260>

Question 1777

On an electrocardiogram (ECG), atrial repolarization is obscured by the:

- A) P wave.
- B) QRS wave.
- C) T wave.
- D) S-T segment.

Answer: <https://biology-forums.com/index.php?topic=501123>

Question 1778

Under normal conditions, where should we expect to see most urea?

- A) blood
- B) extracellular fluids
- C) urine
- D) intracellular fluids

Answer: <https://biology-forums.com/index.php?topic=501802>

Question 1779

Discuss the parts of the distal and proximal epiphyses of the humerus that form articulations with the scapula, ulna, and radius.

Answer: <https://biology-forums.com/index.php?topic=498948>

Question 1780

What ion movement changes the membrane potential in a contractile cell from negative to positive?

- A) influx of sodium ions
- B) outflow of potassium ions
- C) outflow of calcium ions
- D) influx of calcium ions

Answer: <https://biology-forums.com/index.php?topic=501106>

Question 1781

Mr. Reynolds had an increase in his blood urea nitrogen (BUN). BUN is a measure of the amount of nitrogen in the blood that comes from urea, which is normally eliminated by the kidneys. Determine the specific type of metabolism that causes urea to be present in the blood.

Answer: <https://biology-forums.com/index.php?topic=501876>

Question 1782

Explain the difference between potential and kinetic energy.

Answer: <https://biology-forums.com/index.php?topic=498358>

Question 1783

Which respiratory-associated muscles would contract when you take a deep breath to blow up a balloon? Explain the role of these muscles in pulmonary ventilation.

Answer: <https://biology-forums.com/index.php?topic=501637>

Question 1784

Sherell has damaged her phrenic nerve after diving head-first into a shallow lake. Predict the effect on her pattern of ventilation.

Answer: <https://biology-forums.com/index.php?topic=501621>

Question 1785

What maintains the potassium ion concentration in the cytosol of cells?

- A) diffusion
- B) osmosis
- C) Na⁺/K⁺ pump
- D) endocytosis

Answer: <https://biology-forums.com/index.php?topic=502026>

Question 1786

Describe the blood vessels and contribution of anastomoses that constitute the cerebral arterial circle (circle of Willis).

Answer: <https://biology-forums.com/index.php?topic=501290>

Question 1787

What do skeletal and cardiac muscle cells share in common?

- A) branched cells
- B) intercalated discs situated between cells
- C) multinucleate cells
- D) striations

Answer: <https://biology-forums.com/index.php?topic=498592>

Question 1788

Neural sensory signals are relayed to the thalamus, EXCEPT for the sensation of:

- A) hearing.
- B) vision.
- C) olfaction.
- D) dynamic equilibrium.

Answer: <https://biology-forums.com/index.php?topic=500899>

Question 1789

Urine drains from a major calyx into:

- A) the renal tubule.
- B) a minor calyx.
- C) the renal pelvis.
- D) a papilla.

Answer: <https://biology-forums.com/index.php?topic=501888>

Question 1790

Which of the following results from the lipolysis of a triglyceride?

- A) glycerol and fatty acids
- B) amino acids
- C) nucleic acids
- D) polysaccharides

Answer: <https://biology-forums.com/index.php?topic=501790>

Question 1791

Determine how muscles are affected if the muscle receives stimulations so frequently that it has no opportunity to relax between them.

Answer: <https://biology-forums.com/index.php?topic=500358>

Question 1792

What is the final segment of the small intestine?

- A) pylorus
- B) ileum
- C) jejunum
- D) duodenum

Answer: <https://biology-forums.com/index.php?topic=501682>

Question 1793

While climbing stairs in the football stadium, Gary injured his calcaneal tendon (Achilles tendon). Describe the muscles and action(s) that are affected. From what action and activities should he refrain while his tendon heals?

Answer: <https://biology-forums.com/index.php?topic=500284>

Question 1794

What is coupled with glucose reabsorption using a symporter in the early part of the proximal tubule?

- A) hydrogen ions
- B) bicarbonate ions
- C) amino acids
- D) sodium ions

Answer: <https://biology-forums.com/index.php?topic=501930>

Question 1795

What tissue composes the epidermis of the skin?

- A) keratinized stratified squamous epithelium
- B) nonkeratinized simple squamous epithelium
- C) nonkeratinized stratified squamous epithelium
- D) transitional epithelium

Answer: <https://biology-forums.com/index.php?topic=498655>

Question 1796

What is the functional contractile unit of the myofibril?

- A) sarcolemma
- B) A band
- C) I band
- D) sarcomere

Answer: <https://biology-forums.com/index.php?topic=500299>

Question 1797

Discuss the two basic types of hormones, classified according to their chemical structure.

Answer: <https://biology-forums.com/index.php?topic=501040>

Question 1798

Muscles that move the thumb will be named using the term:

- A) superficialis.
- B) carpi.
- C) pollicis.
- D) digiti.

Answer: <https://biology-forums.com/index.php?topic=500233>

Question 1799

List the three types of joints based on their functional classification and explain the degree of movement allowed in each type.

Answer: <https://biology-forums.com/index.php?topic=499041>

Question 1800

Why should a student use the SQ3R method?

- A) The SQ3R method provides a student with a strategy for improving test taking skills.
- B) The SQ3R method provides a plan for a student to improve textbook reading skills.
- C) The SQ3R method provides a student with a strategy for taking notes during lecture class.
- D) The SQ3R method provides a student with ways to improve time management skills.

Answer: <https://biology-forums.com/index.php?topic=498162>

Question 1801

Explain immune surveillance.

Answer: <https://biology-forums.com/index.php?topic=501521>

Question 1802

Classify aldosterone to the appropriate group of hormones.

- A) androgenic steroid
- B) mineralocorticoid
- C) catecholamine
- D) glucocorticoid

Answer: <https://biology-forums.com/index.php?topic=500992>

Question 1803

High levels of testosterone inhibit gonadotropin-releasing hormone (GnRH) by the hypothalamus.

Answer: <https://biology-forums.com/index.php?topic=511260>

Question 1804

What do the macula densa cells regulate in their role as part of the tubuloglomerular feedback loop?

- A) changes in blood pH
- B) changes in glomerular hydrostatic pressure (GHP)
- C) changes in the glomerular colloid osmotic pressure (GCOP)
- D) changes in renal clearance

Answer: <https://biology-forums.com/index.php?topic=501920>

Question 1805

What is the neonatal period?

- A) the first four weeks of life
- B) the first four months of life
- C) the first six months of life
- D) the first year of life

Answer: <https://biology-forums.com/index.php?topic=511363>

Question 1806

Through what two systems are carbon dioxide eliminated from the body?

- A) integumentary and skeletal systems
- B) digestive and urinary systems

- C) respiratory and urinary systems
- D) cardiovascular and lymphatic systems

Answer: <https://biology-forums.com/index.php?topic=502040>

Question 1807

Electrical gradients exist because sodium and potassium ions are separated on either side of the plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=500369>

Question 1808

Receptors that bind norepinephrine and epinephrine are known as:

- A) cholinergic.
- B) muscarinic.
- C) adrenergic.
- D) nicotinic.

Answer: <https://biology-forums.com/index.php?topic=500750>

Question 1809

Glands, such as the thyroid, that secrete their products directly into the blood rather than through ducts are classified as:

- A) endocrine.
- B) exocrine.
- C) sebaceous.
- D) ceruminous.

Answer: <https://biology-forums.com/index.php?topic=498571>

Question 1810

Which of the following can be used to measure heart rate?

- A) R-R interval
- B) S-T segment
- C) Q-T interval
- D) P-R interval

Answer: <https://biology-forums.com/index.php?topic=501127>

Question 1811

Why does bone heal faster than cartilage? Predict how injuries affect each tissue.

Answer: <https://biology-forums.com/index.php?topic=498644>

Question 1812

What type of bond is responsible for the surface tension of water?

- A) nonpolar covalent bond
- B) polar covalent bond
- C) hydrogen bond
- D) ionic bond

Answer: <https://biology-forums.com/index.php?topic=498299>

Question 1813

Discuss the spinal nerves that contribute to the sacral plexuses and the body region(s) served.

Answer: <https://biology-forums.com/index.php?topic=500715>

Question 1814

Which part of the embryo contributes to the fetal portion of the placenta?

- A) epiblast
- B) inner cell mass
- C) hypoblast
- D) trophoblast

Answer: <https://biology-forums.com/index.php?topic=511307>

Question 1815

The ribs and sternum are classified as flat bones because they are thin and broad.

Answer: <https://biology-forums.com/index.php?topic=498806>

Question 1816

Which of the following are TRUE of class I major histocompatibility complex (MHC) molecules?

- A) Class I MHC molecules bind complement.
- B) Class I MHC molecules present endogenous antigens.
- C) Class I MHC molecules present exogenous antigens.
- D) Class I MHC molecules are only present on erythrocyte surfaces.

Answer: <https://biology-forums.com/index.php?topic=501435>

Question 1817

In the crossed-extension reflex, if the right leg flexes, then the left leg:

- A) extends.
- B) abducts.
- C) flexes.
- D) adducts.

Answer: <https://biology-forums.com/index.php?topic=500685>

Question 1818

Discuss morning sickness and hyperemesis gravidarum.

Answer: <https://biology-forums.com/index.php?topic=511407>

Question 1819

What neurotransmitter is released by both preganglionic and postganglionic parasympathetic neurons at their synapses?

- A) both epinephrine and norepinephrine
- B) epinephrine
- C) norepinephrine
- D) acetylcholine

Answer: <https://biology-forums.com/index.php?topic=500781>

Question 1820

Which of the following is NOT a prenatal period?

- A) pre-embryonic
- B) embryonic
- C) infancy
- D) fetal

Answer: <https://biology-forums.com/index.php?topic=511297>

Question 1821

Which of the following reactions requires energy, such as ATP, to proceed?

- A) phosphorylation reactions
- B) oxidation reactions
- C) exergonic reactions
- D) endergonic reactions

Answer: <https://biology-forums.com/index.php?topic=501764>

Question 1822

Provide the tRNA anticodon that is complementary to this mRNA codon: UAC.

- A) ATG
- B) AUG
- C) TUG
- D) TAG

Answer: <https://biology-forums.com/index.php?topic=498453>

Question 1823

Briefly explain why the elbow is a more stable hinge joint than the knee.

Answer: <https://biology-forums.com/index.php?topic=500172>

Question 1824

Name the two structural divisions of the skeletal system and list the bones associated with each system.

Answer: <https://biology-forums.com/index.php?topic=498935>

Question 1825

What part of the motor pathway inhibits inappropriate movements?

- A) occipital lobe
- B) cerebellum
- C) primary motor cortex
- D) basal nuclei

Answer: <https://biology-forums.com/index.php?topic=500561>

Question 1826

What contributes to the fetal portion of the placenta?

- A) allantois
- B) decidua basalis
- C) chorionic villi
- D) decidua capsularis

Answer: <https://biology-forums.com/index.php?topic=511336>

Question 1827

During the recovery period after exercise, we breathe deeper and faster. This increased rate of respiration is known as:

- A) muscle fatigue.
- B) lactic acid buildup.
- C) excess postexercise oxygen consumption (EPOC).
- D) oxidative catabolism.

Answer: <https://biology-forums.com/index.php?topic=500339>

Question 1828

Vasoconstriction of the afferent arteriole increases glomerular hydrostatic pressure (GHP) and the glomerular filtration rate (GFR).

Answer: <https://biology-forums.com/index.php?topic=501977>

Question 1829

What would increase the amount of oxygen unloaded by hemoglobin into peripheral tissues?

- A) decreased temperature
- B) decreased pH
- C) decreased levels of BPG
- D) decreased levels of PCO₂

Answer: <https://biology-forums.com/index.php?topic=501587>

Question 1830

An atom of carbon has an atomic number of 6 and a mass number of 12. Predict how many hydrogen atoms must covalently bond with carbon to satisfy carbon's octet rule. Hydrogen has an atomic number of 1.

Answer: <https://biology-forums.com/index.php?topic=498387>

Question 1831

Discuss the four main types of cells found in gastric glands and indicate their secretions.

Answer: <https://biology-forums.com/index.php?topic=501740>

Question 1832

The respiratory system does NOT function in:

- A) acid-base homeostasis.
- B) odor detection.
- C) speech production.
- D) blood cell production.

Answer: <https://biology-forums.com/index.php?topic=501534>

Question 1833

Cranial nerves and spinal nerves are the two types of nerves found in the peripheral nervous system (PNS).

Answer: <https://biology-forums.com/index.php?topic=500688>

Question 1834

Discuss what nutrients can be converted to triglycerides for storage in adipose tissue.

Answer: <https://biology-forums.com/index.php?topic=501868>

Question 1835

Do you think we make enough ATP to survive if only glycolytic catabolism is used to generate ATP? Explain to support your answer.

Answer: <https://biology-forums.com/index.php?topic=501874>

Question 1836

What type of hormone travels in the blood plasma bound to a protein?

- A) hydrophilic hormones
- B) protein hormones
- C) hydrophobic hormones
- D) neurotransmitters

Answer: <https://biology-forums.com/index.php?topic=500947>

Question 1837

A patient sustained an injury to the lower motor neurons when a board fell on his back at a construction site. The upper motor neurons are intact and undamaged. Determine the effect, if any, on motor control.

Answer: <https://biology-forums.com/index.php?topic=500728>

Question 1838

Which protein does NOT belong in a thin filament?

- A) actin
- B) troponin
- C) tropomyosin
- D) myosin

Answer: <https://biology-forums.com/index.php?topic=500294>

Question 1839

What type of vessel is built to handle the highest pressure of any vessel in the cardiovascular system?

- A) muscular artery
- B) metarteriole
- C) arteriole
- D) elastic artery

Answer: <https://biology-forums.com/index.php?topic=501196>

Question 1840

Which of the following parts of the eye refract light to focus it on the retina?

- A) ciliary body and suspensory ligaments
- B) pupil and iris
- C) cornea and lens
- D) sclera and choroid

Answer: <https://biology-forums.com/index.php?topic=500858>

Question 1841

A muscle that dorsiflexes the foot is the:

- A) tibialis anterior.
- B) soleus.
- C) tibialis posterior.
- D) gastrocnemius.

Answer: <https://biology-forums.com/index.php?topic=500244>

Question 1842

What functional brain system participates in memory, learning, emotion, and behavior?

- A) medial lemniscal system
- B) limbic system
- C) anterolateral system

D) peripheral nervous system

Answer: <https://biology-forums.com/index.php?topic=500520>

Question 1843

Describe the events of the relaxation period of a muscle twitch.

Answer: <https://biology-forums.com/index.php?topic=500357>

Question 1844

In a molecule of oxygen gas, the atoms of oxygen share electrons equally with one another. This statement best describes a(n):

- A) ionic bond.
- B) nonpolar covalent bond.
- C) polar covalent bond.
- D) compound.

Answer: <https://biology-forums.com/index.php?topic=498296>

Question 1845

The main force that promotes filtration in a nephron is:

- A) colloid osmotic pressure (COP).
- B) glomerular colloid osmotic pressure (GCOP).
- C) glomerular hydrostatic pressure (GHP).
- D) capsular hydrostatic pressure (CHP).

Answer: <https://biology-forums.com/index.php?topic=501910>

Question 1846

In the light-adapted state:

- A) rods are bleached and unable to function.
- B) colors are dull.
- C) we can only see color and not black and white.
- D) we could see better in the dark.

Answer: <https://biology-forums.com/index.php?topic=500867>

Question 1847

What functional advantage is there for skeletal muscle cells to be multinucleate?

Answer: <https://biology-forums.com/index.php?topic=498624>

Question 1848

Vertebrae in which region are fused in adults?

- A) cervical vertebrae
- B) thoracic vertebrae
- C) lumbar vertebrae
- D) sacral vertebrae

Answer: <https://biology-forums.com/index.php?topic=498878>

Question 1849

A drug that inhibits the release of norepinephrine will have the greatest affect on:

- A) preganglionic neurons.
- B) somatic motor neurons.
- C) skeletal muscle cells.
- D) autonomic target cells.

Answer: <https://biology-forums.com/index.php?topic=500739>

Question 1850

The crown of a tooth is covered by:

- A) enamel.
- B) cementum.
- C) dentin.
- D) pulp.

Answer: <https://biology-forums.com/index.php?topic=501656>

Question 1851

What blood type is considered the universal donor?

- A) O-
- B) AB+
- C) A+
- D) AB-

Answer: <https://biology-forums.com/index.php?topic=501358>

Question 1852

Which of the following is NOT a function of amniotic fluid?

- A) allows the embryo freedom of movement
- B) protects the embryo from trauma
- C) provides nutrition for the developing embryo
- D) maintains a constant temperature for the developing embryo

Answer: <https://biology-forums.com/index.php?topic=511312>

Question 1853

The lungs are held to the thorax wall by the smooth muscles of the lungs.

Answer: <https://biology-forums.com/index.php?topic=501630>

Question 1854

What is NOT a major function of the kidneys?

- A) regulation of acid-base balance
- B) removal of metabolic wastes
- C) regulation of blood volume and blood pressure
- D) hematopoiesis

Answer: <https://biology-forums.com/index.php?topic=501881>

Question 1855

Determine how the sympathetic and parasympathetic nervous systems achieve homeostasis even though they work antagonistically.

Answer: <https://biology-forums.com/index.php?topic=500823>

Question 1856

What do the white rami communicantes contain?

- A) preganglionic parasympathetic neurons
- B) sympathetic chain ganglia
- C) preganglionic sympathetic neurons
- D) postganglionic sympathetic neurons

Answer: <https://biology-forums.com/index.php?topic=500748>

Question 1857

Discuss the effects of prolactin and oxytocin on a female during pregnancy.

Answer: <https://biology-forums.com/index.php?topic=511406>

Question 1858

What is a major function of the respiratory system?

- A) return excess tissue fluid to the cardiovascular system
- B) deliver oxygen to the blood and remove carbon dioxide from the body
- C) produce vitamin D and retain water
- D) digest food and absorb nutrients into the blood

Answer: <https://biology-forums.com/index.php?topic=498176>

Question 1859

A postsynaptic neuron is bombarded by synaptic inputs from several hundred presynaptic neurons. However, this neuron does not appear to transmit an impulse. Propose an explanation of why this could occur.

Answer: <https://biology-forums.com/index.php?topic=500488>

Question 1860

Calculate cardiac output given an end-diastolic volume of 140 ml, an end-systolic volume of 60 ml, and a heart rate of 85 beats/minute.
Answer: <https://biology-forums.com/index.php?topic=501191>

Question 1861

During the second stage of the inflammatory response, what do neutrophils accomplish when they migrate to areas of damaged tissue?
A) Neutrophils interfere with the ability of viruses or bacteria to infect other cells.
B) Neutrophils are potent vasodilators.
C) Neutrophils increase capillary permeability.
D) Neutrophils destroy bacteria and other cellular debris.
Answer: <https://biology-forums.com/index.php?topic=501428>

Question 1862

What protein, released by cytotoxic T (TC) cells, perforates a target cell's plasma membrane so that enzymes can enter and fragment the target cell's DNA?
A) interleukins
B) interferons
C) cytokines
D) perforins
Answer: <https://biology-forums.com/index.php?topic=501440>

Question 1863

An atom has 3 electrons in its valence shell. What is the atomic number of this atom?
A) 3
B) 7
C) 8
D) 13
Answer: <https://biology-forums.com/index.php?topic=498288>

Question 1864

The thalamus receives information from all of the following afferent fibers EXCEPT for the sense of:
A) taste.
B) smell.
C) hearing.
D) vision.
Answer: <https://biology-forums.com/index.php?topic=500522>

Question 1865

List and summarize the functions of the four divisions of the brain.
Answer: <https://biology-forums.com/index.php?topic=500596>

Question 1866

What prompts the closure of the epiphyseal plate around age 18-21?
A) chondrocytes increase in size and mature
B) ossification of the zone of proliferation
C) mitosis in the zone of calcification
D) chondrocytes actively divide
Answer: <https://biology-forums.com/index.php?topic=498782>

Question 1867

What is NOT a function of cerumen?
A) Cerumen waterproofs and lubricates the external auditory canal.
B) Cerumen traps debris before it reaches the tympanic membrane.
C) Cerumen enhances sound transmission into the ear canal.
D) Cerumen sweeps debris from the external auditory canal.
Answer: <https://biology-forums.com/index.php?topic=500872>

Question 1868

Parturition is also known as:

- A) placentation.
- B) childbirth.
- C) dilation.
- D) labor.

Answer: <https://biology-forums.com/index.php?topic=511355>

Question 1869

Predict the possible blood types, or phenotypes, of offspring in which the father has blood type O and the mother has blood type AB.

- A) The possible blood types of the offspring are phenotypes A or B only.
- B) The possible blood types of the offspring are phenotypes A, B, AB, or O.
- C) The possible blood types of the offspring are phenotypes AB or O only.
- D) The possible blood types of the offspring are phenotypes A or O only.

Answer: <https://biology-forums.com/index.php?topic=511372>

Question 1870

Recommended daily intake of carbohydrates should mostly come from:

- A) monosaccharides.
- B) polysaccharides.
- C) disaccharides.
- D) simple sugars.

Answer: <https://biology-forums.com/index.php?topic=501829>

Question 1871

Interpret what is meant by carbon-13.

- A) Carbon-13 represents an isotope of carbon with a mass number of 13.
- B) Carbon-13 represents the mass number of every atom of carbon.
- C) Carbon-13 represents an isotope of carbon with an atomic number of 13.
- D) Carbon-13 represents an isotope of carbon with 13 protons.

Answer: <https://biology-forums.com/index.php?topic=498284>

Question 1872

List the three types of burns and the region of skin each affects.

Answer: <https://biology-forums.com/index.php?topic=498733>

Question 1873

Place the following hormones in the correct order of their control, from first tier to third tier.

- A) thyrotropin-releasing hormone (TRH), thyroid-stimulating hormone (TSH), production of T3 and T4
- B) thyroid-stimulating hormone (TSH), production of T3 and T4, thyrotropic-releasing hormone (TRH)
- C) thyroid-stimulating hormone (TSH), thyrotropin-releasing hormone (TRH), production of T3 and T4
- D) thyrotropin-releasing hormone (TRH), production of T3 and T4, thyroid-stimulating hormone (TSH)

Answer: <https://biology-forums.com/index.php?topic=500981>

Question 1874

Where is thick skin located?

- A) face
- B) palms
- C) buttocks
- D) elbow

Answer: <https://biology-forums.com/index.php?topic=498674>

Question 1875

Which structural joint classification is held together by dense regular collagenous connective tissue?

- A) amphiarthrosis
- B) fibrous
- C) cartilaginous
- D) synovial

Answer: <https://biology-forums.com/index.php?topic=498966>

Question 1876

Which of the following has the greatest range of motion?

- A) nonaxial joint
- B) uniaxial joint
- C) biaxial joint
- D) multiaxial (triaxial)

Answer: <https://biology-forums.com/index.php?topic=499007>

Question 1877

Gary sustained an injury to a second-order neuron. Do you think he sustained damage to the transmission of sensory information or motor skills? Where are second-order neurons located?

Answer: <https://biology-forums.com/index.php?topic=500605>

Question 1878

The periosteum is secured to underlying bone by collagen fibers called:

- A) perforating (Sharpey's) fibers.
- B) canaliculi.
- C) trabeculae.
- D) Volkmann's canals.

Answer: <https://biology-forums.com/index.php?topic=498751>

Question 1879

Mr. Weddington was admitted to the hospital with chronic heart failure. His feet and legs were swollen with fluid. He should be given a hypotonic drip to draw fluid out of his cells.

Answer: <https://biology-forums.com/index.php?topic=498492>

Question 1880

Select the letter that represents the location of the primary motor cortex.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500511>

Question 1881

The synthesis of fatty acids is known as lipolysis.

Answer: <https://biology-forums.com/index.php?topic=501849>

Question 1882

An insufficient mitral valve (bicuspid valve, or left atrioventricular valve) would allow the backflow of blood into the:

- A) right atrium.
- B) left ventricle.
- C) aorta.
- D) left atrium.

Answer: <https://biology-forums.com/index.php?topic=501099>

Question 1883

Summarize the differences between the somatic motor division and the autonomic nervous system.

Answer: <https://biology-forums.com/index.php?topic=500475>

Question 1884

Describe how endocrine and exocrine glands differ structurally.

Answer: <https://biology-forums.com/index.php?topic=498616>

Question 1885

When we imagine a person exhibiting anatomical position, the palms of the hands are assumed to be facing:

- A) forward.
- B) backward.
- C) to the side.
- D) down.

Answer: <https://biology-forums.com/index.php?topic=498177>

Question 1886

Dehydration increases blood viscosity. Determine the effect of dehydration on blood pressure.

Answer: <https://biology-forums.com/index.php?topic=501294>

Question 1887

Which of the following is a function of a plasma membrane protein?

- A) oxygen transport
- B) form a lipid bilayer
- C) molecular transport through the membrane
- D) promote fluidity of the membrane

Answer: <https://biology-forums.com/index.php?topic=498400>

Question 1888

During saltatory conduction, action potentials are generated:

- A) only at nodes of Ranvier of myelinated axons.
- B) along the entire length of the unmyelinated axon.
- C) regardless if threshold is reached.
- D) when the entire axolemma is depolarized.

Answer: <https://biology-forums.com/index.php?topic=500435>

Question 1889

You have decided to pick up your pencil and jot down some notes. Determine the specific types of white and gray matter in the spinal cord responsible for transmitting this motor information.

Answer: <https://biology-forums.com/index.php?topic=500604>

Question 1890

Explain how glomerular hydrostatic pressure (GHP) and glomerular colloid osmotic pressure (GCOP) act as opposing forces during glomerular filtration.

Answer: <https://biology-forums.com/index.php?topic=501984>

Question 1891

What part of the ischium bears our weight when we sit?

- A) ischial ramus
- B) ischial spine
- C) ischial tuberosity
- D) ischial body

Answer: <https://biology-forums.com/index.php?topic=498907>

Question 1892

As a result of the long refractory period in the contractile cell refractory period, cardiac muscle can NOT exhibit:

- A) oxygen debt.
- B) tetany.
- C) fatigue.
- D) treppe.

Answer: <https://biology-forums.com/index.php?topic=501112>

Question 1893

Since Jerry's accident, he has had no sensations in his injured leg. Based on the functional classifications of neurons, explain the type of neuron that has been damaged. Why has he not regained lost nerve function?

Answer: <https://biology-forums.com/index.php?topic=500477>

Question 1894

Which of the following represents the strongest acidic solution?

- A) pH 1
- B) pH 4
- C) pH 6
- D) pH 9

Answer: <https://biology-forums.com/index.php?topic=498320>

Question 1895

Thin skin contains:

- A) the same layers of keratinocytes as thick skin.
- B) one less layer of keratinocytes than thick skin.
- C) one more layer of keratinocytes than thick skin.
- D) two more layers of keratinocytes than thick skin.

Answer: <https://biology-forums.com/index.php?topic=498673>

Question 1896

Which of the following is the name given to the union between carbon monoxide and hemoglobin?

- A) carboxyhemoglobin
- B) carbaminohemoglobin
- C) oxyhemoglobin
- D) deoxyhemoglobin

Answer: <https://biology-forums.com/index.php?topic=501316>

Question 1897

Generalize the process of glucose catabolism.

Answer: <https://biology-forums.com/index.php?topic=501858>

Question 1898

A ballerina who stands on the tips of her toes is performing:

- A) dorsiflexion.
- B) plantar flexion.
- C) inversion.
- D) eversion.

Answer: <https://biology-forums.com/index.php?topic=499003>

Question 1899

Determine the correct order that light, and then an action potential, travels as it strikes the retina.

- A) retinal ganglion cells, photoreceptor cells, bipolar cells, optic nerve
- B) photoreceptor cells, retinal ganglion cells, bipolar cells, optic nerve
- C) photoreceptor cells, bipolar cells, retinal ganglion cells, optic nerve
- D) bipolar cells, photoreceptor cells, retinal ganglion cells, optic nerve

Answer: <https://biology-forums.com/index.php?topic=500861>

Question 1900

What is the afterbirth?

- A) amniotic fluids
- B) urine
- C) meconium, bile, and other wastes
- D) placenta and attached fetal extraembryonic membranes

Answer: <https://biology-forums.com/index.php?topic=511361>

Question 1901

Discuss the roles of the first messenger and the second messenger in the second-messenger system.

Answer: <https://biology-forums.com/index.php?topic=501041>

Question 1902

Greater muscle tension results when muscle fibers are repeatedly stimulated.

Answer: <https://biology-forums.com/index.php?topic=500376>

Question 1903

The transfer of a phosphate group from creatine phosphate to ADP is classified as:

- A) first phosphorylation.
- B) substrate-level phosphorylation.
- C) second phosphorylation.
- D) oxidative phosphorylation.

Answer: <https://biology-forums.com/index.php?topic=501772>

Question 1904

The sclera is continuous with a transparent layer over the anterior eye known as the:

- A) lens.
- B) cornea.
- C) conjunctiva.
- D) choroid.

Answer: <https://biology-forums.com/index.php?topic=500850>

Question 1905

Upon its release from the ovary, trace the pathway of an oocyte from the ovary to the uterus.

Answer: <https://biology-forums.com/index.php?topic=511278>

Question 1906

Angiotensin-II restores fluid-homeostasis when dehydration occurs due to inadequate fluid intake. Which of the following is NOT an effect of angiotensin-II?

- A) vasodilation
- B) stimulation of antidiuretic hormone (ADH) secretion
- C) stimulation of aldosterone secretion
- D) increase sodium ion reabsorption

Answer: <https://biology-forums.com/index.php?topic=511144>

Question 1907

Heidi arrived home after a long walk with her dog and found that her mom had dinner ready. Why do you think she is not very hungry?

Answer: <https://biology-forums.com/index.php?topic=500818>

Question 1908

A tissue is more likely to heal by regeneration if it:

- A) is avascular.
- B) is amitotic.
- C) possesses stem cells.
- D) lacks satellite cells.

Answer: <https://biology-forums.com/index.php?topic=498610>

Question 1909

Through the microscope, you notice a very large leukocyte with a U-shaped nucleus. What type of leukocyte have you observed?

- A) basophil
- B) monocyte
- C) neutrophil
- D) lymphocyte

Answer: <https://biology-forums.com/index.php?topic=501333>

Question 1910

What vitamin deficiency causes rickets in children?

- A) vitamin A
- B) vitamin C
- C) vitamin D
- D) vitamin K

Answer: <https://biology-forums.com/index.php?topic=498796>

Question 1911

Which two organ systems work to maintain pH balance in the body?

- A) respiratory and urinary

- B) urinary and endocrine
- C) digestive and respiratory
- D) endocrine and nervous

Answer: <https://biology-forums.com/index.php?topic=498324>

Question 1912

What is the function of the lens?

- A) The lens focuses light on the retina.
- B) The lens nourishes the retina.
- C) The lens controls the amount of light passing through the pupil.
- D) The lens reduces the scattering of light.

Answer: <https://biology-forums.com/index.php?topic=500854>

Question 1913

Gallstones may block the flow of bile from the gallbladder by becoming lodged in the:

- A) accessory pancreatic duct.
- B) common hepatic duct.
- C) hepatic portal vein.
- D) cystic duct.

Answer: <https://biology-forums.com/index.php?topic=501708>

Question 1914

What happens when troponin and tropomyosin block the active sites of actin?

- A) The muscle produces a weak contraction.
- B) The muscle relaxes.
- C) The muscle contraction increases tension.
- D) The muscle contraction reaches peak tension.

Answer: <https://biology-forums.com/index.php?topic=500318>

Question 1915

What is responsible for keeping blood vessels partially constricted at all times?

- A) parasympathetic tone
- B) cerebral cortex control
- C) sympathetic tone
- D) somatic control

Answer: <https://biology-forums.com/index.php?topic=500789>

Question 1916

In the epiphyseal plate, cartilage grows:

- A) in a circular fashion.
- B) from the edges inward.
- C) by pushing the epiphysis away from the diaphysis.
- D) by pulling the diaphysis toward the epiphysis.

Answer: <https://biology-forums.com/index.php?topic=498780>

Question 1917

Which of the following is NOT a cranial bone?

- A) parietal bone
- B) occipital bone
- C) frontal bone
- D) zygomatic bone

Answer: <https://biology-forums.com/index.php?topic=498858>

Question 1918

What is found between the preganglionic neuron and postganglionic neuron of a visceral reflex arc?

- A) target cell
- B) central nervous system (CNS)
- C) spinal cord
- D) autonomic ganglion

Answer: <https://biology-forums.com/index.php?topic=500737>

Question 1919

What is delivered over the hypothalamic-hypophyseal portal system?

- A) trophic hormones
- B) tropic hormones
- C) releasing and inhibiting hormones
- D) stimulating hormones

Answer: <https://biology-forums.com/index.php?topic=500960>

Question 1920

How does an epiphyseal plate differ from an epiphyseal line?

Answer: <https://biology-forums.com/index.php?topic=498826>

Question 1921

Explain how the Broca's area and Wernicke's area contribute to language.

Answer: <https://biology-forums.com/index.php?topic=500612>

Question 1922

Where are autonomic ganglia located?

- A) brain
- B) central nervous system (CNS)
- C) peripheral nervous system (PNS)
- D) spinal cord

Answer: <https://biology-forums.com/index.php?topic=500735>

Question 1923

Explain how a sarcomere is affected when thin filaments slide past thick filaments during muscle contraction.

Answer: <https://biology-forums.com/index.php?topic=500348>

Question 1924

Explain how damage to the somatic nervous system would affect the defecation reflex.

Answer: <https://biology-forums.com/index.php?topic=501747>

Question 1925

In the second-messenger system, the first messenger initiates a cellular change in activity by binding a receptor in the plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=501029>

Question 1926

Describe the two basic parts of the micturition reflex.

Answer: <https://biology-forums.com/index.php?topic=501970>

Question 1927

Which of the following is constructed of elastic cartilage?

- A) intervertebral discs
- B) external ear
- C) nose
- D) fetal skeleton

Answer: <https://biology-forums.com/index.php?topic=498583>

Question 1928

Protein catabolism results in:

- A) fatty acids.
- B) nucleotides.
- C) amino acids.
- D) nucleic acids.

Answer: <https://biology-forums.com/index.php?topic=501762>

Question 1929

Alveolar surface tension determines lung compliance.

Answer: <https://biology-forums.com/index.php?topic=501632>

Question 1930

What process propels urine from the kidney to the urinary bladder in the ureters?

- A) osmosis
- B) peristalsis
- C) segmentation
- D) secondary active transport

Answer: <https://biology-forums.com/index.php?topic=501946>

Question 1931

The vertebral region is superior to the:

- A) sacral region.
- B) cervical region.
- C) occipital region.
- D) cephalic region.

Answer: <https://biology-forums.com/index.php?topic=498188>

Question 1932

The tRNA molecule binds a start codon of the mRNA molecule during:

- A) elongation.
- B) initiation.
- C) transcription.
- D) termination.

Answer: <https://biology-forums.com/index.php?topic=498454>

Question 1933

The structure that governs the components of the cell is the:

- A) mitochondrion.
- B) nucleus.
- C) rough endoplasmic reticulum.
- D) Golgi apparatus.

Answer: <https://biology-forums.com/index.php?topic=498437>

Question 1934

What do paracrine cells target?

- A) cells using neurotransmitters
- B) nearby but different types of cells
- C) distant tissues
- D) the same cell or cell type.

Answer: <https://biology-forums.com/index.php?topic=500941>

Question 1935

What hormone promotes an increase in the activity of osteoclasts?

- A) testosterone
- B) parathyroid hormone (PTH)
- C) calcitonin
- D) estrogen

Answer: <https://biology-forums.com/index.php?topic=498795>

Question 1936

Potentially damaging stimuli that result in pain are selectively detected by:

- A) nociceptors.
- B) photoreceptors.
- C) chemoreceptors.
- D) proprioceptors.

Answer: <https://biology-forums.com/index.php?topic=500657>

Question 1937

Which of the following is NOT a muscle involved in the movement of the tongue to manipulate food while chewing and pushing the bolus of food into the throat?

- A) styloglossus
- B) stylohyoid
- C) genioglossus
- D) hyoglossus

Answer: <https://biology-forums.com/index.php?topic=500210>

Question 1938

Discuss the function of the auditory ossicles.

Answer: <https://biology-forums.com/index.php?topic=500931>

Question 1939

Immunological memory can be formed by exposure to an antigen which is remembered by specific leukocytes and circulating antibodies.

Answer: <https://biology-forums.com/index.php?topic=501492>

Question 1940

Describe what is housed within the umbilical cord.

Answer: <https://biology-forums.com/index.php?topic=511403>

Question 1941

What ions are necessary for both the intrinsic and extrinsic pathways to the coagulation cascade?

- A) potassium ions
- B) magnesium ions
- C) calcium ions
- D) iron ions

Answer: <https://biology-forums.com/index.php?topic=501349>

Question 1942

Decreased volume and increased concentration of the extracellular fluid (ECF) is defined as:

- A) hypotonic hydration.
- B) overhydration.
- C) dehydration.
- D) edema.

Answer: <https://biology-forums.com/index.php?topic=502015>

Question 1943

Plasma has a much higher protein content than interstitial fluid.

Answer: <https://biology-forums.com/index.php?topic=511148>

Question 1944

Why are eyelashes shorter than terminal hairs on the scalp?

- A) hormones in the eyebrow follicle turn off growth after it has reached a predetermined length
- B) the vascular supply of the eyebrow follicle is much less than that of the hair follicle on the scalp
- C) eyelashes grow slower than terminal hairs
- D) the growth stage of an eyelash is shorter

Answer: <https://biology-forums.com/index.php?topic=498693>

Question 1945

Which of the following represent the five basic classes of antibodies?

- A) IgA, IgD, IgE, IgG, and IgM
- B) IgA, IgD, IgE, IgF, and IgK
- C) IgA, IgB, IgC, IgD, and IgE
- D) IgA, IgB, IgJ, IgL, and IgM

Answer: <https://biology-forums.com/index.php?topic=501451>

Question 1946

The tissue pictured in this figure is:

- A) composed of a single layer of columnar cells appearing stratified.
- B) composed of two layers of columnar cells.
- C) composed of two layers of cuboidal cells.
- D) composed of multiple layers of columnar cells.

Answer: <https://biology-forums.com/index.php?topic=498563>

Question 1947

Select the order of functional classes of synovial joints that represents the least number of axes to the most number of axes.

- A) nonaxial, uniaxial, multiaxial (triaxial), biaxial
- B) nonaxial, biaxial, uniaxial, multiaxial (triaxial)
- C) nonaxial, uniaxial, biaxial, multiaxial (triaxial)
- D) uniaxial, biaxial, multiaxial (triaxial), nonaxial

Answer: <https://biology-forums.com/index.php?topic=499008>

Question 1948

Flexion and extension are types of:

- A) rotational movements.
- B) angular movements.
- C) special movements.
- D) gliding movements.

Answer: <https://biology-forums.com/index.php?topic=498993>

Question 1949

Discuss the four sutures that involve the parietal bones.

Answer: <https://biology-forums.com/index.php?topic=498938>

Question 1950

List the cardinal signs of inflammation.

Answer: <https://biology-forums.com/index.php?topic=501512>

Question 1951

Explain why the sympathetic nervous system is often call the "fight or flight" division of the ANS.

Answer: <https://biology-forums.com/index.php?topic=500807>

Question 1952

Which follicle contains a secondary oocyte arrested in metaphase II?

- A) primordial follicle
- B) secondary follicle
- C) primary follicle
- D) vesicular (tertiary) follicle

Answer: <https://biology-forums.com/index.php?topic=511230>

Question 1953

Nicotinic and muscarinic receptors are classified as:

- A) alpha receptors.
- B) beta receptors.
- C) cholinergic receptors.
- D) adrenergic receptors.

Answer: <https://biology-forums.com/index.php?topic=500755>

Question 1954

The somatic motor division consists of somatic motor neurons that innervate cardiac, smooth, and skeletal muscle cells.

Answer: <https://biology-forums.com/index.php?topic=500793>

Question 1955

While warming up for gym class, Sheila performed a set of jumping jacks. This action involves:

- A) protraction and retraction.
- B) opposition and reposition.
- C) abduction and adduction.
- D) flexion and extension.

Answer: <https://biology-forums.com/index.php?topic=499000>

Question 1956

A local hyperpolarization that changes a postsynaptic neuron's membrane from resting potential to -85 mV is:

- A) a temporal stimulus.
- B) an excitatory postsynaptic potential (EPSP).
- C) a saltatory stimulus.
- D) an inhibitory postsynaptic potential (IPSP).

Answer: <https://biology-forums.com/index.php?topic=500448>

Question 1957

Explain how glycolytic catabolism (anaerobic catabolism) and oxidative catabolism (aerobic catabolism) differ.

Answer: <https://biology-forums.com/index.php?topic=501860>

Question 1958

Fibrosis results in the formation of a type of:

- A) dense irregular connective tissue.
- B) adipose tissue.
- C) loose connective tissue.
- D) dense regular collagenous connective tissue.

Answer: <https://biology-forums.com/index.php?topic=498609>

Question 1959

What is NOT an effect of growth hormone?

- A) Growth hormone increases the rate of mitosis in the epiphyseal plate of growing bones.
- B) Growth hormone increases the activity of osteogenic cells.
- C) Growth hormone promotes the closure of the epiphyseal plate.
- D) Growth hormone directly stimulates osteoblasts in the periosteum to promote appositional growth.

Answer: <https://biology-forums.com/index.php?topic=498787>

Question 1960

Which pH represents a solution that releases 100 times less hydrogen ions than a pH of 9?

- A) pH 7
- B) pH 8
- C) pH 11
- D) pH 12

Answer: <https://biology-forums.com/index.php?topic=498323>

Question 1961

The predominant ingredient of the inorganic matrix is calcium salts, with the majority existing as large molecules of hydroxyapatite crystals.

Answer: <https://biology-forums.com/index.php?topic=498809>

Question 1962

Describe the structural and functional classification of syndesmoses.

Answer: <https://biology-forums.com/index.php?topic=499046>

Question 1963

The three portions of the sternum, from superior to inferior, are:

- A) manubrium, xiphoid process, body.
- B) clavicular notch, body, sternal angle.
- C) manubrium, sternal angle, xiphoid process.
- D) manubrium, body, xiphoid process.

Answer: <https://biology-forums.com/index.php?topic=498889>

Question 1964

What is NOT required for glycolysis to occur?

- A) phosphate group
- B) mitochondrion
- C) enzymes
- D) ATP

Answer: <https://biology-forums.com/index.php?topic=501773>

Question 1965

Kidney failure can lead to a build-up of a product of transamination in the blood. Which of the following would you expect to remain in the blood rather than be released into the urine?

- A) glycerol
- B) fatty acids
- C) ammonia
- D) ketone bodies

Answer: <https://biology-forums.com/index.php?topic=501800>

Question 1966

Explain why a person with kidney failure could develop anemia.

Answer: <https://biology-forums.com/index.php?topic=501389>

Question 1967

The first pair of cranial nerves is the optic nerve (I).

Answer: <https://biology-forums.com/index.php?topic=500691>

Question 1968

What surface groove separates the right and left ventricles?

- A) interatrial septum
- B) atrioventricular sulcus
- C) interventricular septum
- D) interventricular sulcus

Answer: <https://biology-forums.com/index.php?topic=501062>

Question 1969

Which of the following is the capillary bed fed by the afferent arteriole and drained by the efferent arteriole?

- A) peritubular capillaries
- B) glomerular capillaries
- C) vasa recta
- D) macula densa cells

Answer: <https://biology-forums.com/index.php?topic=501892>

Question 1970

What is the proper position of the erector spinae muscles situated from medially to laterally relative to the axis of the vertebral column?

- A) cervicis, thoracis, lumborum
- B) iliocostalis, longissimus, spinalis
- C) spinalis, longissimus, iliocostalis
- D) capitis, cervicis, thoracis

Answer: <https://biology-forums.com/index.php?topic=500211>

Question 1971

Discuss lysosome function and explain why lysosomal storage diseases are fatal.

Answer: <https://biology-forums.com/index.php?topic=498544>

Question 1972

Which of the following is a freely movable joint?

- A) diarthrosis
- B) amphiarthrosis
- C) fibrous

D) synarthrosis

Answer: <https://biology-forums.com/index.php?topic=498963>

Question 1973

Human cells that lack centrioles cannot:

- A) move.
- B) synthesize proteins.
- C) divide.
- D) metabolize sugars.

Answer: <https://biology-forums.com/index.php?topic=498434>

Question 1974

Discuss how the capillaries of the blood-brain barrier are unique.

Answer: <https://biology-forums.com/index.php?topic=500602>

Question 1975

What is the smallest level of structural organization in the human body?

- A) organ level
- B) chemical level
- C) tissue level
- D) cellular level

Answer: <https://biology-forums.com/index.php?topic=498168>

Question 1976

The process of storing glucose as glycogen is known as:

- A) glycogenesis.
- B) glycolysis.
- C) gluconeogenesis.
- D) glycogenolysis.

Answer: <https://biology-forums.com/index.php?topic=501803>

Question 1977

What separates the thoracic cavity from the abdominopelvic cavity?

- A) pericardium
- B) pleura
- C) diaphragm
- D) mediastinum

Answer: <https://biology-forums.com/index.php?topic=498194>

Question 1978

What cells play an extensive role in the eradication of bacteria as phagocytes?

- A) basophils
- B) neutrophils
- C) memory B cells
- D) eosinophils

Answer: <https://biology-forums.com/index.php?topic=501479>

Question 1979

Which of the following body temperatures is recognized as hypothermia?

- A) above 42.8 °C (109 °F)
- B) below 32 °C (89.6 °F)
- C) above 38.3 °C (101 °F)
- D) above 41.1 °C (106 °F)

Answer: <https://biology-forums.com/index.php?topic=501825>

Question 1980

Describe the hormones that increase cardiac output.

Answer: <https://biology-forums.com/index.php?topic=501283>

Question 1981

Twenty-year-old Leslie learned she is hyperopic after having her eyes examined. What best describes her eye condition?

- A) Her eyeballs are too short.
- B) Her eyeballs are too long.
- C) Her eyeball shape is normal.
- D) Her eyes are experiencing age-related decline.

Answer: <https://biology-forums.com/index.php?topic=500860>

Question 1982

What do platelets possess?

- A) plasma membrane
- B) nucleus
- C) the ability to reproduce by mitosis
- D) protein-synthesizing organelles

Answer: <https://biology-forums.com/index.php?topic=501341>

Question 1983

A person in anatomical position is visualized to be:

- A) laying down on his or her back.
- B) standing upright.
- C) sitting down.
- D) laying down on the stomach.

Answer: <https://biology-forums.com/index.php?topic=498179>

Question 1984

Voluntary neural control is necessary for:

- A) relaxation of the external urethral sphincter.
- B) contraction of the detrusor muscle.
- C) contraction of the internal urethral sphincter.
- D) relaxation of the internal urethral sphincter.

Answer: <https://biology-forums.com/index.php?topic=501950>

Question 1985

Identify the lateral rectus muscle.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500204>

Question 1986

The thoracic cavity is situated superior to the abdominopelvic cavity and separated by the diaphragm. Therefore, the diaphragm creates a:

- A) transverse (horizontal) plane or cross section.
- B) midsagittal (median) plane.
- C) parasagittal plane.
- D) frontal (coronal) plane.

Answer: <https://biology-forums.com/index.php?topic=498195>

Question 1987

Which pair of bones meets along the sagittal suture?

- A) lacrimal bones
- B) parietal bones
- C) temporal bones
- D) nasal bones

Answer: <https://biology-forums.com/index.php?topic=498860>

Question 1988

Sarah was so upset and nervous that a snake was in her house that she began hyperventilating. Predict the acid-base imbalance created by her psychological state.

- A) respiratory acidosis
- B) respiratory alkalosis
- C) metabolic acidosis
- D) metabolic alkalosis

Answer: <https://biology-forums.com/index.php?topic=511138>

Question 1989

Calculate the end-systolic volume (ESV) if the end-diastolic volume (EDV) in a resting heart is 110 ml and stroke volume (SV) is 70 ml.

- A) 10 ml
- B) 40 ml
- C) 50 ml
- D) 180 ml

Answer: <https://biology-forums.com/index.php?topic=501141>

Question 1990

Which of the following is most likely to produce an action potential?

- A) excitatory postsynaptic potential (EPSP)
- B) opening of potassium ion channels
- C) inhibitory postsynaptic potential (IPSP)
- D) hyperpolarization

Answer: <https://biology-forums.com/index.php?topic=500446>

Question 1991

Immature cells that actively divide by mitosis and create most of the ECM of cartilage are:

- A) chondroblasts.
- B) chondrocytes.
- C) osteoblasts.
- D) fibroblasts.

Answer: <https://biology-forums.com/index.php?topic=498582>

Question 1992

Describe how an increase in blood pressure is returned to normal using the baroreceptor reflex.

Answer: <https://biology-forums.com/index.php?topic=501284>

Question 1993

Explain the role of major histocompatibility complex (MHC) molecules in T cell activation.

Answer: <https://biology-forums.com/index.php?topic=501516>

Question 1994

Carbohydrate digestion begins in the:

- A) stomach.
- B) mouth.
- C) small intestine.
- D) esophagus.

Answer: <https://biology-forums.com/index.php?topic=501661>

Question 1995

What reflex causes muscle relaxation?

- A) crossed-extension reflex
- B) Golgi tendon reflex
- C) stretch reflex
- D) flexion (withdrawal) reflex

Answer: <https://biology-forums.com/index.php?topic=500682>

Question 1996

Which dietary requirement for bone health can be made in response to skin exposure to UV light?

- A) vitamin C

- B) vitamin D
- C) vitamin K
- D) calcium ions

Answer: <https://biology-forums.com/index.php?topic=498793>

Question 1997

A patient learns he has a heart murmur. He learns that his physician hears abnormal sounds during the S1 heart sound. Determine the cause of his heart murmur.

Answer: <https://biology-forums.com/index.php?topic=501190>

Question 1998

Which of the following is NOT a main effect of the thyroid hormones?

- A) promotion of growth and development
- B) regulation of blood calcium levels
- C) synergism with the sympathetic nervous system
- D) regulation of the metabolic rate and thermoregulation

Answer: <https://biology-forums.com/index.php?topic=500977>

Question 1999

What type of secretion involves the release of substances, such as saliva and sweat, in secretory vesicles by exocytosis?

- A) merocrine
- B) apocrine
- C) endocrine
- D) holocrine

Answer: <https://biology-forums.com/index.php?topic=498573>

Question 2000

In a solution, the solute dissolves the solvent.

Answer: <https://biology-forums.com/index.php?topic=498369>

Question 2001

What is cranial nerve VIII?

- A) trigeminal nerve
- B) facial nerve
- C) glossopharyngeal nerve
- D) vestibulocochlear nerve

Answer: <https://biology-forums.com/index.php?topic=500631>

Question 2002

List the three major processes involved in urine formation.

Answer: <https://biology-forums.com/index.php?topic=501957>

Question 2003

The human body has more fluid in the extracellular compartment than in the intracellular compartment.

Answer: <https://biology-forums.com/index.php?topic=511147>

Question 2004

Fatty acids cannot undergo gluconeogenesis to produce glucose molecules.

Answer: <https://biology-forums.com/index.php?topic=501848>

Question 2005

What flap of elastic cartilage keeps food and liquids from entering the larynx during swallowing?

- A) corniculate cartilage
- B) epiglottis
- C) thyroid cartilage
- D) arytenoid cartilage

Answer: <https://biology-forums.com/index.php?topic=501545>

Question 2006

The cells of the macula densa and the juxtaglomerular (JG) cells form the:

- A) renal corpuscle.
- B) filtration membrane.
- C) juxtaglomerular apparatus (JGA).
- D) nephron loop (loop of Henle).

Answer: <https://biology-forums.com/index.php?topic=501901>

Question 2007

Discuss the target cells of the somatic and autonomic nervous systems.

Answer: <https://biology-forums.com/index.php?topic=500805>

Question 2008

The visceral pericardium is the same as the:

- A) epicardium.
- B) fibrous pericardium.
- C) myocardium.
- D) endocardium.

Answer: <https://biology-forums.com/index.php?topic=501083>

Question 2009

The trigone of the urinary bladder is created by:

- A) the internal and external urethral sphincters.
- B) the openings to the two ureteral orifices and the internal urethral orifice.
- C) the internal and external urethral orifices.
- D) the prostatic, membranous, and spongy urethra.

Answer: <https://biology-forums.com/index.php?topic=501947>

Question 2010

The right lymphatic duct receives lymph from the:

- A) right arm.
- B) right leg.
- C) left arm.
- D) left leg.

Answer: <https://biology-forums.com/index.php?topic=501396>

Question 2011

Explain the role of major histocompatibility complex (MHC) molecules and human leukocyte antigen (HLA) genes in organ transplant and rejection.

Answer: <https://biology-forums.com/index.php?topic=501518>

Question 2012

Which of the following is the action of the levator palpebrae superioris muscle?

- A) Levator palpebrae superioris lifts the scapula.
- B) Levator palpebrae superioris elevates the eyebrow.
- C) Levator palpebrae superioris elevates, or opens, the upper eyelid.
- D) Levator palpebrae superioris closes the eye.

Answer: <https://biology-forums.com/index.php?topic=500205>

Question 2013

Where does each half of the visual field get segregated so that it reaches the opposite hemisphere of the brain?

- A) lateral geniculate nucleus
- B) hypothalamus
- C) optic chiasma
- D) occipital lobe

Answer: <https://biology-forums.com/index.php?topic=500870>

Question 2014

Air moves out of the lungs when the pressure inside the lungs is:

- A) less than atmospheric pressure.
- B) greater than atmospheric pressure.
- C) equal to atmospheric pressure.
- D) less than intrapleural pressure.

Answer: <https://biology-forums.com/index.php?topic=501566>

Question 2015

Generalize the role of the lower motor neuron in motor control.

Answer: <https://biology-forums.com/index.php?topic=500720>

Question 2016

Most inspired particles, such as dust, fail to reach the lungs because of the ciliated mucous membrane lining the upper respiratory structures.

Answer: <https://biology-forums.com/index.php?topic=501629>

Question 2017

Which of the following is NOT a region of the male urethra?

- A) serosa
- B) prostatic
- C) membranous
- D) spongy

Answer: <https://biology-forums.com/index.php?topic=511192>

Question 2018

Vesicles known as melanosomes are taken into the cytosol of keratinocytes by endocytosis. The melanosome is transported to the superficial side of the keratinocyte to shield its nucleus.

Answer: <https://biology-forums.com/index.php?topic=498714>

Question 2019

Discuss why melanin decreases the synthesis of vitamin D in response to UV radiation. Why is it necessary to maintain normal levels of vitamin D?

Answer: <https://biology-forums.com/index.php?topic=498736>

Question 2020

A positive feedback mechanism initiates the rhythmic contractions of labor. Determine the hormones involved in this feedback loop.

- A) relaxin and human chorionic gonadotropin (hCG)
- B) cortisol and aldosterone
- C) prostaglandins and oxytocin
- D) estrogens and progesterone

Answer: <https://biology-forums.com/index.php?topic=511353>

Question 2021

How is the sensation of taste affected by a dry mouth?

- A) Foods have a more intense taste when the mouth is dry.
- B) Foods have a less intense taste when the mouth is dry.
- C) The moisture level of the mouth has no influence on taste sensation.
- D) Most foods will taste bitter when the mouth is dry.

Answer: <https://biology-forums.com/index.php?topic=500838>

Question 2022

Peggy is having surgery on the right carpal region. A 3 cm incision will be made deep to the skin and muscle, but will be superficial to the bone. Explain to her where her surgery will occur.

Answer: <https://biology-forums.com/index.php?topic=498244>

Question 2023

Which of the following complements the flexion (withdrawal) reflex?

- A) Golgi tendon reflex
- B) gag reflex
- C) crossed-extension reflex
- D) stretch reflex

Answer: <https://biology-forums.com/index.php?topic=500684>

Question 2024

The high levels of estrogens during the luteal phase of the ovarian cycle trigger release of more FSH and LH, and their levels peak around day 14, which causes ovulation.

Answer: <https://biology-forums.com/index.php?topic=511265>

Question 2025

Julie smelled cake baking in the oven, triggering the gastric phase of stomach regulation.

Answer: <https://biology-forums.com/index.php?topic=501728>

Question 2026

When fewer hydrogen ions are secreted into the filtrate, how is blood pH affected?

- A) Blood pH increases.
- B) Blood pH is not affected by hydrogen ions.
- C) Blood pH decreases.
- D) Blood pH alternately increases and decreases.

Answer: <https://biology-forums.com/index.php?topic=511132>

Question 2027

Maury fell from a ladder and broke his calcaneus. What body region sustained damage?

- A) wrist
- B) ankle
- C) heel
- D) palm

Answer: <https://biology-forums.com/index.php?topic=498917>

Question 2028

Describe the two criteria by which epithelial tissues are classified.

Answer: <https://biology-forums.com/index.php?topic=498614>

Question 2029

Gene's parachute did not open when he jumped out of the airplane. He injured his back in the thoracic and lumbar regions, damaging the autonomic ganglia found close to his spinal cord. What neurons did he likely damage?

- A) parasympathetic preganglionic neurons
- B) sympathetic preganglionic neurons
- C) sympathetic postganglionic neurons
- D) somatic motor neurons

Answer: <https://biology-forums.com/index.php?topic=500747>

Question 2030

The gallbladder is located on the posterior side of the:

- A) liver.
- B) pancreas.
- C) stomach.
- D) spleen.

Answer: <https://biology-forums.com/index.php?topic=501701>

Question 2031

The fusion of a sperm cell and secondary oocyte is known as:

- A) ovulation.
- B) meiosis.
- C) fertilization.
- D) capacitation.

Answer: <https://biology-forums.com/index.php?topic=511300>

Question 2032

Which vessel is present in the arterial pathway but missing from the venous pathway?

- A) interlobular
- B) segmental

- C) interlobar
- D) arcuate

Answer: <https://biology-forums.com/index.php?topic=501893>

Question 2033

What part of the nervous system integrates and interprets information from PNS sensory neurons?

- A) sensory (afferent) division
- B) visceral motor division, or autonomic nervous system (ANS)
- C) central nervous system (CNS)
- D) somatic nervous system (SNS)

Answer: <https://biology-forums.com/index.php?topic=500670>

Question 2034

Reabsorption of filtered glucose from the filtrate into the cells of the proximal tubule is by:

- A) facilitated diffusion.
- B) diffusion.
- C) secondary active transport.
- D) antiport.

Answer: <https://biology-forums.com/index.php?topic=501935>

Question 2035

What type of joint allows motion around only one axis?

- A) biaxial
- B) uniaxial
- C) nonaxial
- D) multiaxial (triaxial)

Answer: <https://biology-forums.com/index.php?topic=498991>

Question 2036

What type of ion channels is always open?

- A) leak
- B) local
- C) active
- D) regulated

Answer: <https://biology-forums.com/index.php?topic=500417>

Question 2037

How many homologous chromosome pairs are present in most human cells?

- A) 4
- B) 18
- C) 23
- D) 46

Answer: <https://biology-forums.com/index.php?topic=498439>

Question 2038

Which of the following is NOT a subclass of a fibrous joint?

- A) synchondrosis
- B) suture
- C) syndesmosis
- D) gomphosis

Answer: <https://biology-forums.com/index.php?topic=498968>

Question 2039

Under normal conditions, what is the response to an increase in thyrotropin-releasing hormone (TRH)?

- A) increase in growth hormone production
- B) increase in thyroid-stimulating hormone (TSH) production
- C) decrease in triiodothyronine (T3) production
- D) decrease in thyroxine (T4) production

Answer: <https://biology-forums.com/index.php?topic=500985>

Question 2040

Damage to the stylohyoid, mylohyoid, and geniohyoid impairs:

- A) chewing.
- B) lateral eye movements.
- C) swallowing.
- D) smiling.

Answer: <https://biology-forums.com/index.php?topic=500208>

Question 2041

Which of the following cartilaginous joints functions primarily in protection and shock absorption of the spinal column?

- A) pubic symphysis
- B) costochondral joint
- C) epiphyseal plate
- D) intervertebral disc

Answer: <https://biology-forums.com/index.php?topic=498980>

Question 2042

Determine how an upper respiratory infection can impact the ear.

Answer: <https://biology-forums.com/index.php?topic=500937>

Question 2043

Which of the following statements is not true?

- A) Your employer may check your credit record.
- B) The credit bureau retains information on legal actions that may impair your financial strength.
- C) The credit bureau decides who receives credit.
- D) Your credit report lists your bank accounts and credit cards.¹

Answer: <https://biology-forums.com/index.php?topic=503669>

Question 2044

Explain how hair follicle receptors complement the function of tactile corpuscles and Merkel cell fibers.

Answer: <https://biology-forums.com/index.php?topic=500718>

Question 2045

Thymosin and thymopoietin assist in the maturation of:

- A) B lymphocytes.
- B) alpha cells.
- C) T lymphocytes.
- D) chief cells.

Answer: <https://biology-forums.com/index.php?topic=501018>

Question 2046

You feel a mosquito land on your arm. This stimulus is carried to the central nervous system (CNS) by the:

- A) somatic sensory division.
- B) visceral sensory division.
- C) visceral motor division (autonomic nervous system).
- D) somatic motor division.

Answer: <https://biology-forums.com/index.php?topic=500622>

Question 2047

The sense of equilibrium does NOT depend on input from:

- A) the cochlea.
- B) proprioceptors in muscles and joints.
- C) the vestibular system.
- D) the visual system.

Answer: <https://biology-forums.com/index.php?topic=500892>

Question 2048

Robin takes an anticholinergic drug to deal with her allergies. Explain why she often experiences constipation.

Answer: <https://biology-forums.com/index.php?topic=500822>

Question 2049

The process of digesting food breaks large food particles into smaller particles. This example is best described as a(n):

- A) exchange reaction.
- B) catabolic reaction.
- C) anabolic reaction.
- D) neutralization reaction.

Answer: <https://biology-forums.com/index.php?topic=498303>

Question 2050

Explain how static equilibrium differs from dynamic equilibrium.

Answer: <https://biology-forums.com/index.php?topic=500933>

Question 2051

What is NOT located on the distal epiphysis of the humerus?

- A) greater tubercle
- B) trochlea
- C) medial epicondyle
- D) capitulum

Answer: <https://biology-forums.com/index.php?topic=498894>

Question 2052

The structural units of mature compact bone are called:

- A) lacunae.
- B) osteocytes.
- C) osteons.
- D) canaliculi.

Answer: <https://biology-forums.com/index.php?topic=498767>

Question 2053

The Na⁺/K⁺ pump transports three sodium ions out of the cell for every two potassium ions moved into the cell. This is an example of:

- A) a symport pump.
- B) a uniport pump.
- C) an antiport pump.
- D) facilitated diffusion.

Answer: <https://biology-forums.com/index.php?topic=498417>

Question 2054

Which brain nucleus serves as the body's "master clock?"

- A) basal nucleus
- B) suprachiasmatic nucleus
- C) lentiform nucleus
- D) caudate nucleus

Answer: <https://biology-forums.com/index.php?topic=500567>

Question 2055

Since erythrocytes lack a nucleus to make repairs, they only live:

- A) 10-20 days.
- B) 30-60 days
- C) 100-120 days.
- D) 145-175 days.

Answer: <https://biology-forums.com/index.php?topic=501319>

Question 2056

Which rib articulates with the fourth thoracic vertebra (T4)?

- A) second rib
- B) fourth rib
- C) fifth rib

D) eighth rib

Answer: <https://biology-forums.com/index.php?topic=498890>

Question 2057

What specific part of the neuron communicates with a target cell and serves as the secretory region of the cell?

- A) myelin sheath
- B) dendrites
- C) axon terminals (synaptic knobs)
- D) cell body

Answer: <https://biology-forums.com/index.php?topic=500402>

Question 2058

Loss of balance and equilibrium can indicate damage to the:

- A) hypoglossal nerve (XII).
- B) accessory nerve (XI).
- C) vestibulocochlear nerve (VIII).
- D) trochlear nerve (IV).

Answer: <https://biology-forums.com/index.php?topic=500639>

Question 2059

Skeletal muscle fibers possess intercalated discs.

Answer: <https://biology-forums.com/index.php?topic=500362>

Question 2060

The conversion of pepsinogen into the active form, pepsin, requires:

- A) alkaline mucus.
- B) vitamin B12.
- C) an acidic pH.
- D) intrinsic factor.

Answer: <https://biology-forums.com/index.php?topic=501671>

Question 2061

What connective tissue sheath wraps the axon of a neuron?

- A) endoneurium
- B) fascicle
- C) epineurium
- D) perineurium

Answer: <https://biology-forums.com/index.php?topic=500628>

Question 2062

Skin pigmentation is provided by Merkel cells.

Answer: <https://biology-forums.com/index.php?topic=498711>

Question 2063

Hypertension is defined as:

- A) high blood pressure.
- B) excess aldosterone.
- C) low blood pressure.
- D) high blood sugar.

Answer: <https://biology-forums.com/index.php?topic=501227>

Question 2064

Describe the role of calcium in the crossbridge cycle of the sliding filament mechanism.

Answer: <https://biology-forums.com/index.php?topic=500384>

Question 2065

What hormones are produced by zona glomerulosa of the adrenal cortex?

- A) neurohormones
- B) glucocorticoids

- C) androgenic steroids
- D) mineralocorticoids

Answer: <https://biology-forums.com/index.php?topic=500991>

Question 2066

Most organs are innervated from both the sympathetic and parasympathetic nervous systems, referred to as:

- A) sympathetic tone
- B) dual innervation
- C) antagonism
- D) parasympathetic tone

Answer: <https://biology-forums.com/index.php?topic=500792>

Question 2067

What contributes to the calculation of the mass number?

- A) sum of protons and electrons
- B) sum of electrons and neutrons
- C) sum of protons and neutrons
- D) sum of protons, neutrons, and electrons

Answer: <https://biology-forums.com/index.php?topic=498281>

Question 2068

Protein channels that are situated between cells create small pores for the passage of small substances are known as:

- A) tight junctions.
- B) desmosomes.
- C) gap junctions.
- D) occluding junctions.

Answer: <https://biology-forums.com/index.php?topic=498553>

Question 2069

Name the bones that contribute to the pelvic girdle.

Answer: <https://biology-forums.com/index.php?topic=498949>

Question 2070

Which plexus provides motor and sensory innervation to the upper limb?

- A) brachial plexus
- B) cranial plexus
- C) sacral plexus
- D) lumbar plexus

Answer: <https://biology-forums.com/index.php?topic=500647>

Question 2071

What three bones fuse during childhood to form the coxal bone?

- A) ischium, coccyx, ilium
- B) sacrum, ilium, coccyx
- C) pubis, sacrum, ischium
- D) ilium, ischium, pubis

Answer: <https://biology-forums.com/index.php?topic=498904>

Question 2072

The epidermis is:

- A) keratinized mucous membrane.
- B) nonkeratinized mucous membrane.
- C) nonkeratinized cutaneous membrane.
- D) keratinized cutaneous membrane.

Answer: <https://biology-forums.com/index.php?topic=498651>

Question 2073

Normal blood pH should fall between:

- A) 7.35 and 7.45.

- B) 7.15 and 7.25.
- C) 6.95 and 7.15.
- D) 7.65 and 7.85.

Answer: <https://biology-forums.com/index.php?topic=501307>

Question 2074

What part of the radius articulates with the humerus?

- A) radial styloid process
- B) radial tuberosity
- C) radial head
- D) olecranon

Answer: <https://biology-forums.com/index.php?topic=498899>

Question 2075

Bundles of axons known as tracts are part of the:

- A) central nervous system.
- B) peripheral nervous system.
- C) ganglion.
- D) myelin sheath.

Answer: <https://biology-forums.com/index.php?topic=500407>

Question 2076

Increasing levels of blood glucose stimulate the release of insulin. This type of stimulation is known as:

- A) positive stimulation.
- B) neural stimulation.
- C) hormonal stimulation.
- D) humoral stimulation.

Answer: <https://biology-forums.com/index.php?topic=500952>

Question 2077

What are the three primary brain vesicles that form from the neural tube?

- A) mesencephalon, telencephalon, diencephalon
- B) forebrain, midbrain, hindbrain
- C) brainstem, diencephalon, cerebellum
- D) midbrain, pons, medulla oblongata

Answer: <https://biology-forums.com/index.php?topic=500504>

Question 2078

What part of the joint cavity lubricates the joint, supplies nutrients and removes metabolic wastes, and absorbs shock?

- A) ligament
- B) synovial fluid
- C) articular cartilage
- D) adipose tissue

Answer: <https://biology-forums.com/index.php?topic=498985>

Question 2079

Discuss the role of orexin in keeping us awake.

Answer: <https://biology-forums.com/index.php?topic=500611>

Question 2080

The vibrations received by the tympanic membrane are transferred to the oval window by the:

- A) auditory ossicles.
- B) oval window.
- C) cochlea.
- D) stapedius muscle.

Answer: <https://biology-forums.com/index.php?topic=500878>

Question 2081

Motor control is initiated by lower motor neurons and transmitted to upper motor neurons by interneurons situated within the CNS.

Answer: <https://biology-forums.com/index.php?topic=500698>

Question 2082

Which of the following correctly describes the transition from bronchi into smaller branches in the bronchial tree?

- A) The lining changes from respiratory epithelium to stratified squamous epithelium.
- B) More hyaline cartilage is found in the smaller passageways of the bronchial tree.
- C) The amount of smooth muscle increases in the smaller passageways of the bronchial tree.
- D) The rings of cartilage completely disappear during the transition from the trachea into the bronchial tree.

Answer: <https://biology-forums.com/index.php?topic=501551>

Question 2083

An atom of iron has an atomic number of 26. Which of the following is TRUE?

- A) Iron has 13 protons and 13 electrons.
- B) Iron has 26 protons.
- C) Iron has 13 protons and 13 neutrons.
- D) Iron has 13 electrons.

Answer: <https://biology-forums.com/index.php?topic=498279>

Question 2084

Which joint is associated with the rotator cuff, a group of muscles and their tendons?

- A) shoulder
- B) elbow
- C) knee
- D) hip

Answer: <https://biology-forums.com/index.php?topic=499026>

Question 2085

Which of the following can be fertilized?

- A) secondary oocyte
- B) polar body
- C) primary oocyte
- D) oogonium

Answer: <https://biology-forums.com/index.php?topic=511229>

Question 2086

A patient arrives in your clinic with a sunburn that affects the epidermis only. Her skin appears red and is mildly painful. You believe she has a:

- A) first-degree burn.
- B) second-degree burn.
- C) third-degree burn.
- D) fourth-degree burn.

Answer: <https://biology-forums.com/index.php?topic=498703>

Question 2087

Where is the motor response initiated?

- A) cranial nerves
- B) spinal nerves
- C) lower motor neurons of the peripheral nervous system (PNS)
- D) motor areas of the brain

Answer: <https://biology-forums.com/index.php?topic=500630>

Question 2088

Speech language pathologists work with patients who have difficulty swallowing. Name the muscles that initiate swallowing and push food into the esophagus, and describe their actions.

Answer: <https://biology-forums.com/index.php?topic=500268>

Question 2089

A muscle cell experiencing resting membrane potential is:

- A) experiencing depolarization.
- B) more negatively charged on its exterior than in its interior.

- C) propagating an action potential.
- D) polarized.

Answer: <https://biology-forums.com/index.php?topic=500303>

Question 2090

Explain how lymph is formed.

Answer: <https://biology-forums.com/index.php?topic=501506>

Question 2091

Determine which of the following conditions will benefit from the administration of moderate amounts of hypotonic fluids.

- A) hypotonic hydration
- B) water toxicity
- C) overhydration
- D) dehydration

Answer: <https://biology-forums.com/index.php?topic=502016>

Question 2092

Sophie is working in the lab with a chemical with the formula $C_{12}H_{24}O_{12}$. With what type of organic molecule does she work? Discuss how you came to your conclusion.

Answer: <https://biology-forums.com/index.php?topic=498390>

Question 2093

Extreme stretching of the reticular layer of the dermis results in tension, or cleavage, lines.

Answer: <https://biology-forums.com/index.php?topic=498713>

Question 2094

In laboratory, you will study tissues. This area of study is known as:

- A) gross anatomy.
- B) physiology.
- C) histology.
- D) cytology.

Answer: <https://biology-forums.com/index.php?topic=498172>

Question 2095

What part of the female reproductive system receives the penis during sexual intercourse?

- A) vagina
- B) uterus
- C) clitoris
- D) uterine tube

Answer: <https://biology-forums.com/index.php?topic=511223>

Question 2096

Which special sense does NOT travel through the thalamus at any point in its transmission?

- A) olfaction
- B) vision
- C) gustation
- D) hearing

Answer: <https://biology-forums.com/index.php?topic=500557>

Question 2097

Ependymal cells:

- A) help form the blood-brain barrier.
- B) circulate cerebrospinal fluid.
- C) form myelin in the brain and spinal cord.
- D) serve as wandering phagocytes during brain injury.

Answer: <https://biology-forums.com/index.php?topic=500410>

Question 2098

Summarize the influence of bile salts, cholecystinin (CCK), and secretin on bile production and release.

Answer: <https://biology-forums.com/index.php?topic=501749>

Question 2099

The apex of the heart is situated toward the:

- A) posterior rib cage.
- B) right shoulder.
- C) left hip.
- D) left shoulder.

Answer: <https://biology-forums.com/index.php?topic=501060>

Question 2100

The primary auditory cortex, located in the temporal lobe of the cerebrum, is the first to receive auditory information.

Answer: <https://biology-forums.com/index.php?topic=500580>

Question 2101

What is NOT one of the three main parts of a cell?

- A) cytoplasm
- B) nucleus
- C) extracellular fluid
- D) plasma membrane

Answer: <https://biology-forums.com/index.php?topic=498393>

Question 2102

What do endergonic reactions require?

- A) glucose
- B) energy
- C) oxygen
- D) amino acids

Answer: <https://biology-forums.com/index.php?topic=501763>

Question 2103

Enzymes bind with substrates at their active sites and are permanently altered by the binding process.

Answer: <https://biology-forums.com/index.php?topic=498375>

Question 2104

Discuss the characteristics of the female pelvis.

Answer: <https://biology-forums.com/index.php?topic=498950>

Question 2105

Determine the impact if the connection between the sinoatrial (SA) node and the atrioventricular (AV) node becomes blocked.

- A) The ventricles will beat faster.
- B) The ventricles will beat more slowly.
- C) The ventricular rhythm will not change.
- D) The atria will contract more forcefully.

Answer: <https://biology-forums.com/index.php?topic=501117>

Question 2106

In which process of cellular respiration is water produced?

- A) glycolysis
- B) citrate synthesis
- C) citric acid cycle
- D) electron transport chain

Answer: <https://biology-forums.com/index.php?topic=501784>

Question 2107

Blood pressure is equivalent to:

- A) hydrostatic pressure.
- B) net filtration pressure
- C) colloid osmotic pressure.

D) oncotic pressure.

Answer: <https://biology-forums.com/index.php?topic=501234>

Question 2108

Which hormones promote facultative water reabsorption?

- A) aldosterone and antidiuretic hormone (ADH)
- B) aldosterone and atrial natriuretic peptide (ANP)
- C) antidiuretic hormone (ADH) and atrial natriuretic peptide (ANP)
- D) atrial natriuretic peptide (ANP) and parathyroid hormone

Answer: <https://biology-forums.com/index.php?topic=501936>

Question 2109

Increases in blood pressure are detected by:

- A) thermoreceptors.
- B) baroreceptors.
- C) chemoreceptors.
- D) nociceptors.

Answer: <https://biology-forums.com/index.php?topic=501221>

Question 2110

Determine the differences between cell division of normal cells and that of cancer cells.

Answer: <https://biology-forums.com/index.php?topic=498487>

Question 2111

Which type of angular movement moves a body part away from the midline of the body or another reference point?

- A) flexion
- B) plantar flexion
- C) adduction
- D) abduction

Answer: <https://biology-forums.com/index.php?topic=498998>

Question 2112

Determine the effects of norepinephrine when it binds receptors on blood vessels serving smooth, skeletal, and cardiac muscle cells.

Answer: <https://biology-forums.com/index.php?topic=500812>

Question 2113

Abduction is an opposing action to extension.

Answer: <https://biology-forums.com/index.php?topic=499035>

Question 2114

Muscular walls of the thorax and abdomen are composed of:

- A) spinal erector muscles.
- B) oblique and rectus muscles.
- C) pectoralis muscles.
- D) gluteal muscles.

Answer: <https://biology-forums.com/index.php?topic=500215>

Question 2115

The right kidney sits _____ to the left kidney due to the position of the liver.

- A) posterior
- B) superior
- C) inferior
- D) medial

Answer: <https://biology-forums.com/index.php?topic=501879>

Question 2116

The hepatic portal system delivers blood to the hepatic portal vein in the spleen.

Answer: <https://biology-forums.com/index.php?topic=501275>

Question 2117

A digestive system disease has inhibited Mr. Sumner's ability to absorb vitamins. Explain how the bones are affected when there are inadequate levels of vitamins C and K.

Answer: <https://biology-forums.com/index.php?topic=498832>

Question 2118

Branching "ribs" of bone present in spongy bone are known as:

- A) lamellae.
- B) trabeculae.
- C) lacunae.
- D) canaliculi.

Answer: <https://biology-forums.com/index.php?topic=498769>

Question 2119

The thoracic and sacral curvatures of the vertebral column are _____ while the cervical and lumbar curvatures are _____.

- A) convex; concave
- B) secondary; primary
- C) S-shaped; C-shaped
- D) concave; convex

Answer: <https://biology-forums.com/index.php?topic=498881>

Question 2120

A pregnant woman typically needs about 300 extra calories each day to support both herself and the fetus.

Answer: <https://biology-forums.com/index.php?topic=511390>

Question 2121

The retina is the only portion of the eye to contain photoreceptor cells.

Answer: <https://biology-forums.com/index.php?topic=500907>

Question 2122

Which of the following is a factor on which expiration depends?

- A) recoil of elastic tissue in the lungs
- B) decrease in intrapulmonary pressure
- C) contraction of expiratory muscles
- D) increase in lung volume

Answer: <https://biology-forums.com/index.php?topic=501567>

Question 2123

A pathway of ATP production that results in the formation of lactic acid is:

- A) glycolytic catabolism.
- B) anabolism.
- C) oxidative catabolism.
- D) aerobic catabolism.

Answer: <https://biology-forums.com/index.php?topic=500321>

Question 2124

How much blood does the average adult have?

- A) 1.5 L
- B) 3 L
- C) 5 L
- D) 7 L

Answer: <https://biology-forums.com/index.php?topic=501300>

Question 2125

A damaged right bundle branch will prevent the passage of the action potential to the:

- A) sinoatrial (SA) node.
- B) atrioventricular (AV) bundle.
- C) Purkinje fibers in the right ventricle.

D) atrioventricular (AV) node.

Answer: <https://biology-forums.com/index.php?topic=501121>

Question 2126

What effect does the parasympathetic nervous system have on heart rate and blood pressure?

- A) no effect on heart rate and blood pressure
- B) increases heart rate and blood pressure
- C) decreases heart rate and blood pressure
- D) at first decreases, then increases heart rate and blood pressure

Answer: <https://biology-forums.com/index.php?topic=500783>

Question 2127

Place the following events of excitation in the correct order.

- 1) ion channels on the sarcolemma open and sodium ions enter the muscle fiber
- 2) the entry of sodium ions into the muscle fiber depolarizes the sarcolemma locally
- 3) acetylcholine is released from vesicles in the motor neuron into the synaptic cleft
- 4) an action potential arrives at the axon terminal of a motor neuron
- 5) acetylcholine binds to ligand-gated sodium ion channels in the motor end plate

- A) 2, 4, 3, 5, 1
- B) 4, 3, 5, 1, 2
- C) 3, 4, 5, 1, 2
- D) 4, 5, 3, 2, 1

Answer: <https://biology-forums.com/index.php?topic=500310>

Question 2128

Joanne is ready to give birth. How much should her cervix be dilated?

- A) 2 mm
- B) 4 cm
- C) 10 cm
- D) 20 cm

Answer: <https://biology-forums.com/index.php?topic=511358>

Question 2129

Explain how the hamstring and quadriceps femoris groups work as antagonists to one another. What action depends on the coordination of these groups?

Answer: <https://biology-forums.com/index.php?topic=500279>

Question 2130

List the three types of teeth and explain the specialized roles of each type of tooth in mastication.

Answer: <https://biology-forums.com/index.php?topic=501736>

Question 2131

The presence of a synaptic cleft between cells is characteristic of:

- A) chemical synapse.
- B) electrical synapse.
- C) both chemical and electrical synapses.
- D) neither chemical nor electrical synapses.

Answer: <https://biology-forums.com/index.php?topic=500439>

Question 2132

Let's imagine a new form of birth control for males has been developed. This drug works by inhibiting capacitation of the sperm after ejaculation has occurred. Determine why capacitation is a critical step through which sperm must pass for fertilization to be successful and why this drug may work.

Answer: <https://biology-forums.com/index.php?topic=511271>

Question 2133

The most taste buds are present in:

- A) filiform papillae.
- B) foliate papillae.
- C) fungiform papillae.

D) vallate (circumvallate) papillae.

Answer: <https://biology-forums.com/index.php?topic=500834>

Question 2134

Explain why inulin is an ideal choice to measure renal clearance and the glomerular filtration rate (GFR).

Answer: <https://biology-forums.com/index.php?topic=501968>

Question 2135

Determine the atomic number of a neutral atom with 3 shells and 6 electrons in its valence shell.

Answer: <https://biology-forums.com/index.php?topic=498353>

Question 2136

A lumbar puncture, or spinal tap, draws out a sample of CSF from the subdural space around the spinal cord.

Answer: <https://biology-forums.com/index.php?topic=500587>

Question 2137

Discuss the path of nerve impulses from the spiral organ (organ of Corti) to the primary auditory cortex in the brain.

Answer: <https://biology-forums.com/index.php?topic=500932>

Question 2138

What serves as the link between the hydrophilic hormone serving as the first messenger and the second messenger?

- A) cAMP
- B) G-protein
- C) protein kinase
- D) adenylate cyclase

Answer: <https://biology-forums.com/index.php?topic=500950>

Question 2139

Hyaline cartilage is found in the ears and part of the larynx.

Answer: <https://biology-forums.com/index.php?topic=498636>

Question 2140

What vitamin is necessary for the proper production of functional clotting factors in the liver?

- A) vitamin C
- B) vitamin D
- C) vitamin K
- D) vitamin E

Answer: <https://biology-forums.com/index.php?topic=501347>

Question 2141

Which of the following processes are functionally opposite to one another?

- A) endocytosis and exocytosis
- B) phagocytosis and pinocytosis
- C) simple diffusion and facilitated diffusion
- D) osmosis and simple diffusion

Answer: <https://biology-forums.com/index.php?topic=498422>

Question 2142

Damage to the pectoralis major would interfere with a person's ability to:

- A) extend the forearm.
- B) abduct the humerus.
- C) adduct the humerus.
- D) elevate the scapula.

Answer: <https://biology-forums.com/index.php?topic=500224>

Question 2143

What is NOT a function of the plasma membrane?

- A) communication with other cells

- B) structural support
- C) catalyze macromolecules into subunits
- D) isolate the cell from its surroundings

Answer: <https://biology-forums.com/index.php?topic=498394>

Question 2144

Inotropic agents affect:

- A) contractility.
- B) depolarization.
- C) heart rate.
- D) stroke volume.

Answer: <https://biology-forums.com/index.php?topic=501152>

Question 2145

Programmed cell death is called:

- A) neoplasia.
- B) apoptosis.
- C) hydrolysis.
- D) metastasis.

Answer: <https://biology-forums.com/index.php?topic=498467>

Question 2146

Which of the following increases the rate of a reaction?

- A) cold temperatures
- B) absence of a catalyst
- C) increased reactant concentration
- D) solid reactants

Answer: <https://biology-forums.com/index.php?topic=498306>

Question 2147

What part of the cerebral cortex is responsible for personality, the creation of an awareness of self, and the ability to recognize appropriate behavior?

- A) parietal association cortex
- B) temporal association cortex
- C) Wernicke's area
- D) prefrontal cortex

Answer: <https://biology-forums.com/index.php?topic=500573>

Question 2148

Which sensation is NOT detected by the skin?

- A) light touch
- B) texture
- C) equilibrium
- D) temperature

Answer: <https://biology-forums.com/index.php?topic=498656>

Question 2149

Which of the following extends the elbow?

- A) brachioradialis
- B) triceps brachii
- C) brachialis
- D) biceps brachii

Answer: <https://biology-forums.com/index.php?topic=500229>

Question 2150

Identify the cranial nerves NOT involved in carrying taste information from the tongue into the CNS.

- A) hypoglossal nerves (CN XII)
- B) vagus nerves (CN X)
- C) facial nerves (CN VII)
- D) glossopharyngeal nerves (CN IX)

Answer: <https://biology-forums.com/index.php?topic=500842>

Question 2151

Differentiate terminal bronchioles from respiratory bronchioles.

Answer: <https://biology-forums.com/index.php?topic=501613>

Question 2152

Deep inward extensions of the sarcolemma form a tunnel-like network inside the muscle cell known as:

- A) the sarcoplasmic reticulum.
- B) myofibrils.
- C) myofilaments.
- D) transverse tubules (T-tubules).

Answer: <https://biology-forums.com/index.php?topic=500292>

Question 2153

Which of the following cartilaginous joints is found only in young, growing people?

- A) costochondral joint
- B) pubic symphysis
- C) intervertebral disc
- D) epiphyseal plate

Answer: <https://biology-forums.com/index.php?topic=498979>

Question 2154

The polio virus can destroy the cells in the anterior horns of the spinal gray matter. Discuss the problems encountered if the anterior horns of the spinal gray matter are damaged.

Answer: <https://biology-forums.com/index.php?topic=500617>

Question 2155

Which of the following is NOT a basic function of the lymphatic system?

- A) absorption of dietary fats
- B) regulation of calcium ion concentration in the blood
- C) regulation of interstitial fluid volume
- D) immune functions

Answer: <https://biology-forums.com/index.php?topic=501393>

Question 2156

What increases the permeability of the glomerulus by making the capillaries "leaky"?

- A) microvilli
- B) fenestrations
- C) desmosomes
- D) tight junctions

Answer: <https://biology-forums.com/index.php?topic=501896>

Question 2157

Neutrophils are most effective at:

- A) antibody formation.
- B) fighting a viral infection.
- C) fighting a parasitic infection.
- D) fighting a bacterial infection.

Answer: <https://biology-forums.com/index.php?topic=501332>

Question 2158

The midbrain, pons, and medulla oblongata of the brainstem all arise from the hindbrain.

Answer: <https://biology-forums.com/index.php?topic=500578>

Question 2159

Contraction of the cremaster muscle:

- A) propels sperm through the urethra.
- B) moves sperm through the ductus deferens.
- C) wrinkles the scrotal skin.

D) pulls the testes closer to the body.

Answer: <https://biology-forums.com/index.php?topic=511198>

Question 2160

List the four phases of the cardiac cycle.

Answer: <https://biology-forums.com/index.php?topic=501181>

Question 2161

What two products can be generated from the transamination of an amino acid?

- A) palmitic acid and fatty acids
- B) ketone bodies and glycerol
- C) fatty acids and glycerol
- D) a carbon skeleton and the amino acid glutamate

Answer: <https://biology-forums.com/index.php?topic=501799>

Question 2162

What is more likely to promote an action potential?

- A) depolarization
- B) hyperpolarization
- C) repolarization
- D) absolute refractory period

Answer: <https://biology-forums.com/index.php?topic=500423>

Question 2163

Select the statement that best describes an acid.

- A) An acid is a substance that generally has covalent bonds that do not dissociate into charged particles in water.
- B) An acid is a chemical that dissociates in water to release a hydrogen ion (H⁺).
- C) An acid is a chemical that accepts a hydrogen ion (H⁺) in a solution.
- D) An acid is a chemical that dissociates to release equal amounts of hydrogen ions (H⁺) and hydroxide ions (OH⁻).

Answer: <https://biology-forums.com/index.php?topic=501995>

Question 2164

The largest and strongest bone in the body is the:

- A) humerus.
- B) tibia.
- C) femur.
- D) fibula.

Answer: <https://biology-forums.com/index.php?topic=498912>

Question 2165

List the 12 pairs of cranial nerves, in numerical order, with their corresponding Roman numerals.

Answer: <https://biology-forums.com/index.php?topic=500704>

Question 2166

Determine the first phase of the antibody-mediated immune response.

- A) B cells should now be present in the body's fluids.
- B) Memory cells react rapidly upon a second encounter with the antigen.
- C) B cell clones recognize its specific antigen.
- D) Antibody levels in the blood rise dramatically.

Answer: <https://biology-forums.com/index.php?topic=501443>

Question 2167

As a way to conserve glucose for the cells of the nervous system during glucose sparing, the body preferentially catabolizes:

- A) glycerol.
- B) glycogen.
- C) fatty acids.
- D) amino acids.

Answer: <https://biology-forums.com/index.php?topic=501811>

Question 2168

Which organ(s) regulate blood volume by altering the amount of fluid released in urine?

- A) spleen
- B) kidneys
- C) pancreas
- D) liver

Answer: <https://biology-forums.com/index.php?topic=501226>

Question 2169

Which of the following describes the fluid mosaic model of the plasma membrane structure?

- A) The phospholipid bilayer is embedded with associated proteins, cholesterol and sugars and has a dynamic arrangement.
- B) Phospholipids consist of a polar head and a nonpolar tail made of three fatty acid chains.
- C) The lipid bilayer is solid at body temperature, thus protecting the cell.
- D) The plasma membrane is composed of two layers of proteins embedded with lipids.

Answer: <https://biology-forums.com/index.php?topic=498402>

Question 2170

Summarize the two steps of protein synthesis.

Answer: <https://biology-forums.com/index.php?topic=498481>

Question 2171

Discuss how the osteoblast differs functionally from the osteoclast.

Answer: <https://biology-forums.com/index.php?topic=498819>

Question 2172

The closure of a precapillary sphincter prevents blood flow to tissues from:

- A) elastic arteries.
- B) venules.
- C) arterioles.
- D) muscular arteries.

Answer: <https://biology-forums.com/index.php?topic=501197>

Question 2173

We have unique patterns on our fingers, toes, palms, and soles created by:

- A) Merkel cells.
- B) dendritic (Langerhans) cells.
- C) cleavage lines.
- D) epidermal ridges.

Answer: <https://biology-forums.com/index.php?topic=498682>

Question 2174

What are the two types of cells housed in the juxtaglomerular apparatus (JGA)?

Answer: <https://biology-forums.com/index.php?topic=501956>

Question 2175

Explain the difference between ketogenesis and ketosis.

Answer: <https://biology-forums.com/index.php?topic=501865>

Question 2176

Discuss emulsification and indicate why it is important.

Answer: <https://biology-forums.com/index.php?topic=501751>

Question 2177

When growth hormone levels are low, which hormone stimulates its release?

- A) somatotropin
- B) growth hormone-releasing hormone (GHRH)
- C) prolactin-releasing hormone (PRH)

D) somatostatin

Answer: <https://biology-forums.com/index.php?topic=500973>

Question 2178

Which cranial bone articulates with every other cranial bone?

- A) sphenoid bone
- B) parietal bone
- C) ethmoid bone
- D) temporal bone

Answer: <https://biology-forums.com/index.php?topic=498867>

Question 2179

Julisa won a lottery ticket and began to hyperventilate in her excitement. Explain how hyperventilation affects the partial pressure of carbon dioxide in her blood and her blood pH.

Answer: <https://biology-forums.com/index.php?topic=501620>

Question 2180

A plane that divides the body into superior and inferior parts is known as a:

- A) sagittal plane.
- B) midsagittal (median) plane.
- C) transverse (horizontal) plane.
- D) frontal (coronal) plane.

Answer: <https://biology-forums.com/index.php?topic=498190>

Question 2181

The pancreatic juices transported in the main pancreatic duct are destined for the:

- A) liver.
- B) gallbladder.
- C) duodenum.
- D) stomach.

Answer: <https://biology-forums.com/index.php?topic=501698>

Question 2182

What prevents bacteria and materials in the large intestine from flowing backward into the ileum of the small intestine?

- A) pyloric sphincter
- B) circular folds
- C) gastroesophageal sphincter
- D) ileocecal valve

Answer: <https://biology-forums.com/index.php?topic=501683>

Question 2183

How do nonpolar covalent bonds differ from polar covalent bonds?

Answer: <https://biology-forums.com/index.php?topic=498357>

Question 2184

Which of the following muscles is named for its action?

- A) deltoid
- B) gluteus maximus
- C) biceps brachii
- D) adductor magnus

Answer: <https://biology-forums.com/index.php?topic=500185>

Question 2185

Hemostasis is mediated by:

- A) lymphocytes.
- B) erythrocytes.
- C) monocytes.
- D) platelets.

Answer: <https://biology-forums.com/index.php?topic=501340>

Question 2186

Which plexus is NOT served by the vagus nerve?

- A) brachial plexus
- B) esophageal plexus
- C) cardiac plexus
- D) pulmonary plexus

Answer: <https://biology-forums.com/index.php?topic=500773>

Question 2187

Bone growth and remodeling depends on adequate intake of:

- A) sodium, calcium, and vitamin E.
- B) calcium, magnesium, and vitamin B.
- C) calcium, vitamin C, and vitamin K.
- D) vitamin A, vitamin C, and chlorine.

Answer: <https://biology-forums.com/index.php?topic=498794>

Question 2188

What major event occurs during the first stage of labor?

- A) The placenta is delivered.
- B) The newborn is delivered.
- C) The cervix thins and dilates.
- D) The fetal head crowns.

Answer: <https://biology-forums.com/index.php?topic=511359>

Question 2189

Explain the role of the vagus nerve during the cephalic phase.

Answer: <https://biology-forums.com/index.php?topic=501741>

Question 2190

Explain the structural characteristics that allow you to visually distinguish among skeletal muscle, smooth muscle and cardiac muscle tissue.

Answer: <https://biology-forums.com/index.php?topic=498645>

Question 2191

Filtrate and whole blood contain identical constituents.

Answer: <https://biology-forums.com/index.php?topic=501974>

Question 2192

Where are releasing and inhibiting hormones made?

- A) thyroid gland
- B) posterior pituitary (neurohypophysis)
- C) hypothalamus
- D) anterior pituitary (adenohypophysis)

Answer: <https://biology-forums.com/index.php?topic=500967>

Question 2193

In response to physical inactivity, we expect to see muscles:

- A) hypertrophy.
- B) increase the diameter of the muscle fiber.
- C) increase numbers of myofibrils.
- D) atrophy.

Answer: <https://biology-forums.com/index.php?topic=500337>

Question 2194

When body temperature increases above the normal range, thermoreceptors in the skin and hypothalamus detect the increase in body temperature. The heat-loss center of the hypothalamus is activated, which sends signals to blood vessels and sweat glands. In response, blood vessels in the skin dilate and sweat glands release sweat. Determine the part of this negative feedback loop that serves as the effector(s).

- A) hypothalamus
- B) blood vessels and sweat glands

- C) thermoreceptors
- D) body temperature

Answer: <https://biology-forums.com/index.php?topic=501823>

Question 2195

The pelvic girdle consists of two bones, the clavicle and scapula, which support the upper limb and anchor it to the trunk.

Answer: <https://biology-forums.com/index.php?topic=498922>

Question 2196

Discuss the components of the cytoplasm.

Answer: <https://biology-forums.com/index.php?topic=498469>

Question 2197

During which phase of the M phase of the cell cycle does the mitotic spindle form?

- A) anaphase
- B) metaphase
- C) prophase
- D) telophase

Answer: <https://biology-forums.com/index.php?topic=498462>

Question 2198

The axons of parasympathetic postganglionic neurons are:

- A) situated within terminal ganglia.
- B) long.
- C) found close to the spinal cord.
- D) short.

Answer: <https://biology-forums.com/index.php?topic=500771>

Question 2199

Blood pressure regulation is a function of aldosterone although this hormone indirectly promotes water reabsorption.

Answer: <https://biology-forums.com/index.php?topic=501035>

Question 2200

Elizabeth fell down a flight of stairs. The angle between her right foot and the tibia increased as her toes were bent toward the ground. What movement do you think caused her to injure her foot?

- A) dorsiflexion
- B) plantar flexion
- C) abduction
- D) eversion

Answer: <https://biology-forums.com/index.php?topic=499005>

Question 2201

When climbing stairs, which muscle or muscle group flexes your knee?

- A) hamstring group
- B) tibialis anterior
- C) iliopsoas
- D) quadriceps femoris group

Answer: <https://biology-forums.com/index.php?topic=500249>

Question 2202

Which hormone acts as a potent anti-inflammatory agent?

- A) cortisol
- B) epinephrine
- C) aldosterone
- D) insulin

Answer: <https://biology-forums.com/index.php?topic=501000>

Question 2203

A disease that attacks and disables the myenteric plexus would:

- A) increase the motility of muscularis externa.
- B) decrease the motility of muscularis externa.
- C) increase gastric secretion.
- D) decrease gastric secretion.

Answer: <https://biology-forums.com/index.php?topic=501650>

Question 2204

Urine is transported from kidney to the urinary bladder by the:

- A) urethra.
- B) ureter.
- C) aorta.
- D) inferior vena cava.

Answer: <https://biology-forums.com/index.php?topic=501880>

Question 2205

The left ventricle has greater muscle mass than the right ventricle since it pumps against greater resistance.

Answer: <https://biology-forums.com/index.php?topic=501158>

Question 2206

What does the depolarization of the transverse tubules (T-tubules) promote?

- A) binding of acetylcholine to ligand-gated sodium ion channels
- B) release of calcium from the sarcoplasmic reticulum
- C) release of acetylcholine from vesicles in the motor neuron into the synaptic cleft
- D) entry of sodium ions into the muscle fiber through voltage-gated sodium ion channels

Answer: <https://biology-forums.com/index.php?topic=500312>

Question 2207

Summarize the five primary taste sensations.

Answer: <https://biology-forums.com/index.php?topic=500918>

Question 2208

Classify the conversion of glycerol into glucose.

- A) gluconeogenesis
- B) glycogenesis
- C) glycogenolysis
- D) glycolysis

Answer: <https://biology-forums.com/index.php?topic=501805>

Question 2209

What is the function of the goblet cells?

- A) produce speech
- B) detect odors
- C) secrete mucus
- D) maintain acid-base balance

Answer: <https://biology-forums.com/index.php?topic=501542>

Question 2210

Because of their ability to rapidly divide during brain injury, which type of neuroglial cell would be more likely to form a brain tumor?

- A) oligodendrite
- B) astrocyte
- C) ependymal cell
- D) Schwann cell

Answer: <https://biology-forums.com/index.php?topic=500409>

Question 2211

In 1848, Phineas Gage sustained a brain injury when an iron rod pierced through his left prefrontal cerebral cortex. What do you think was the result?

- A) Gage was unable to move the right side of his body.
- B) Gage's personality, behavior, and psychological state changed.
- C) Gage was unable to understand language.

D) Gage was unable to produce language.

Answer: <https://biology-forums.com/index.php?topic=500517>

Question 2212

Damage to the splanchnic nerves would affect functioning of the:

- A) heart.
- B) lungs.
- C) urinary bladder.
- D) eye.

Answer: <https://biology-forums.com/index.php?topic=500774>

Question 2213

A nerve cell releases chemical messengers to trigger changes in a nearby muscle cell. This is example of a core principle known as:

- A) feedback loops.
- B) cell-cell communication.
- C) principle of complementarity of structure and function.
- D) gradients.

Answer: <https://biology-forums.com/index.php?topic=498216>

Question 2214

Identify the bones that articulate with the clavicle and name each joint formed.

Answer: <https://biology-forums.com/index.php?topic=498946>

Question 2215

Identify the corrugator supercilii muscle.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500199>

Question 2216

Explain the role sodium ions play in the depolarization stage of the action potential.

Answer: <https://biology-forums.com/index.php?topic=500351>

Question 2217

The heart is situated in the middle of the thoracic cavity in a region known as the:

- A) dorsal cavity.
- B) mediastinum.
- C) pleural cavity.
- D) cardiac notch.

Answer: <https://biology-forums.com/index.php?topic=501061>

Question 2218

What statement best describes pyrogens?

- A) Pyrogens cause the hypothalamic thermostat to reset to a higher range.
- B) Pyrogens interfere with the ability of bacteria or viruses to infect other cells.
- C) Pyrogens are potent vasodilators.
- D) Pyrogens increase secretion of thymosin.

Answer: <https://biology-forums.com/index.php?topic=501432>

Question 2219

What best describes the structure of a synovial joint?

- A) No joint space separates the articulating bones.
- B) The joint is fastened together by dense regular collagenous connective tissue.
- C) A fluid-filled cavity is found between the articulating bones.
- D) Cartilage is situated between the articulating bones.

Answer: <https://biology-forums.com/index.php?topic=498967>

Question 2220

Summarize the process of gluconeogenesis.

Answer: <https://biology-forums.com/index.php?topic=501867>

Question 2221

The mucosa of the alimentary canal from esophagus to anus is composed of simple columnar epithelium.

Answer: <https://biology-forums.com/index.php?topic=501721>

Question 2222

What is typical of restrictive lung diseases?

- A) decreased efficiency of expiration
- B) increased vital capacity
- C) decreased pulmonary compliance
- D) decreased alveolar surface tension

Answer: <https://biology-forums.com/index.php?topic=501602>

Question 2223

Describe how the iris regulates light entry into the eye during sympathetic and parasympathetic stimulation.

Answer: <https://biology-forums.com/index.php?topic=500924>

Question 2224

Gillian prefers to study alone. She mostly draws diagrams from the textbook or makes charts and tables to organize her thoughts as she reads. Determine and discuss her learning style.

Answer: <https://biology-forums.com/index.php?topic=498238>

Question 2225

The atomic number represents the number of:

- A) electrons in an atom.
- B) protons in an atom.
- C) protons and neutrons in the nucleus of an atom.
- D) neutrons in an atom.

Answer: <https://biology-forums.com/index.php?topic=498280>

Question 2226

The startle reflex occurs when auditory information reaches the:

- A) thalamus.
- B) midbrain.
- C) hypothalamus.
- D) pons.

Answer: <https://biology-forums.com/index.php?topic=500890>

Question 2227

What chemical is necessary for the transformation of angiotensin-I (A-I) into active angiotensin-II (A-II)?

- A) atrial natriuretic peptide (ANP)
- B) renin
- C) angiotensinogen
- D) angiotensin-converting enzyme (ACE)

Answer: <https://biology-forums.com/index.php?topic=501923>

Question 2228

The simplest level of organization in the human body is the cellular level.

Answer: <https://biology-forums.com/index.php?topic=498220>

Question 2229

Creatinine, urea, uric acid, and ammonium ions are too large to pass through the filtration membrane.

Answer: <https://biology-forums.com/index.php?topic=501975>

Question 2230

Which segment of the small intestine receives chyme from the stomach?

- A) duodenum
- B) cecum
- C) ileum
- D) jejunum

Answer: <https://biology-forums.com/index.php?topic=501681>

Question 2231

What reduces alveolar surface tension?

- A) gas
- B) water
- C) surfactant
- D) mucus

Answer: <https://biology-forums.com/index.php?topic=501569>

Question 2232

Explain the range of specific gravity that is seen with urine.

Answer: <https://biology-forums.com/index.php?topic=501967>

Question 2233

Building blocks of organic molecules are known as:

- A) electrolytes.
- B) polymers.
- C) monomers.
- D) enzymes.

Answer: <https://biology-forums.com/index.php?topic=498330>

Question 2234

On a laboratory exam, you are asked to identify various muscle tissues through the microscope. Describe the characteristics you will use to differentiate among the three types of muscle tissue.

Answer: <https://biology-forums.com/index.php?topic=500383>

Question 2235

How long does bone repair generally take?

- A) 2-4 weeks
- B) 6-8 weeks
- C) 12-16 weeks
- D) 4-6 months

Answer: <https://biology-forums.com/index.php?topic=498803>

Question 2236

Substances that lose electrons are said to be:

- A) synthesized.
- B) oxidized.
- C) reduced.
- D) anabolized.

Answer: <https://biology-forums.com/index.php?topic=501767>

Question 2237

A fully saturated hemoglobin molecule transports:

- A) 1 molecule of oxygen.
- B) 2 molecules of oxygen.
- C) 4 molecules of oxygen.
- D) 8 molecules of oxygen.

Answer: <https://biology-forums.com/index.php?topic=501585>

Question 2238

The sensory, or afferent, division of the peripheral nervous system carries information from the brain and spinal cord to effector organs.

Answer: <https://biology-forums.com/index.php?topic=500461>

Question 2239

What is the final electron acceptor in the electron transport chain?

- A) carbon dioxide
- B) acetyl-CoA
- C) oxygen
- D) pyruvate

Answer: <https://biology-forums.com/index.php?topic=501782>

Question 2240

The function of the pharyngotympanic (eustachian) tube is to equalize air pressure on both sides of the tympanic membrane.

Answer: <https://biology-forums.com/index.php?topic=500911>

Question 2241

Ribs 8-12 are considered false ribs because they do not directly attach to the sternum by their own cartilage. Instead, the costal cartilage of ribs 8-10 attach to the cartilage of the seventh rib.

Answer: <https://biology-forums.com/index.php?topic=498929>

Question 2242

Summarize the role of the kidneys in regulating red blood cell production.

Answer: <https://biology-forums.com/index.php?topic=501951>

Question 2243

From medial to lateral, what are the muscles of the hamstring group?

- A) semitendinosus, biceps femoris, semimembranosus
- B) semimembranosus, semitendinosus, biceps femoris
- C) semitendinosus, semimembranosus, biceps femoris
- D) biceps femoris, semitendinosus, semimembranosus

Answer: <https://biology-forums.com/index.php?topic=500241>

Question 2244

Describe the structure of hemoglobin.

Answer: <https://biology-forums.com/index.php?topic=501375>

Question 2245

What is found in the buffy coat when blood is centrifuged?

Answer: <https://biology-forums.com/index.php?topic=501373>

Question 2246

The innermost serous membrane attached to the heart muscle is called the:

- A) visceral peritoneum.
- B) visceral pleura.
- C) visceral pericardium.
- D) parietal pericardium.

Answer: <https://biology-forums.com/index.php?topic=498201>

Question 2247

Summarize the steps of the crossbridge cycle.

Answer: <https://biology-forums.com/index.php?topic=500355>

Question 2248

What characteristic of life involves the removal of waste products that result from metabolic processes?

- A) growth
- B) reproduction
- C) excretion
- D) irritability

Answer: <https://biology-forums.com/index.php?topic=498167>

Question 2249

Dhara has Sjögren's syndrome, an autoimmune disorder in which the body's white blood cells destroy glands such as the salivary glands. Determine the impact on taste sensation.

Answer: <https://biology-forums.com/index.php?topic=500920>

Question 2250

What vessels pick up excess extracellular fluid in the interstitial space and return it to circulation?

- A) jugular veins
- B) lymphatic vessels
- C) pulmonary veins
- D) coronary arteries

Answer: <https://biology-forums.com/index.php?topic=501395>

Question 2251

The breakdown of carbohydrates into glucose in the body is classified as:

- A) synthesis.
- B) anabolism.
- C) homeostasis
- D) catabolism.

Answer: <https://biology-forums.com/index.php?topic=501760>

Question 2252

Articular cartilage in synovial joints is avascular. Which of the following sources nourishes the cartilage with nutrients and removes metabolic byproducts?

- A) adipose tissue
- B) synovial fluid
- C) ligament
- D) tendon

Answer: <https://biology-forums.com/index.php?topic=498987>

Question 2253

The ABCDE rule divides the body into 11 areas, each representing 9% of the total body surface area to estimate the percent of the body affected by burns.

Answer: <https://biology-forums.com/index.php?topic=498720>

Question 2254

Which of the following arteries gives rise to all others listed?

- A) ulnar artery
- B) brachial artery
- C) radial artery
- D) axillary artery

Answer: <https://biology-forums.com/index.php?topic=501249>

Question 2255

Cerebrospinal fluid increases the buoyancy of the brain so it is not crushed under its own weight.

Answer: <https://biology-forums.com/index.php?topic=500584>

Question 2256

Surface barriers, such as cutaneous and mucous membranes, serve the immune system as the:

- A) first line of defense.
- B) second line of defense.
- C) third line of defense.
- D) fourth line of defense.

Answer: <https://biology-forums.com/index.php?topic=501414>

Question 2257

What wave on the electrocardiogram (ECG) occurs during the ventricular ejection phase of the cardiac cycle?

- A) P wave
- B) Q wave
- C) R wave
- D) T wave

Answer: <https://biology-forums.com/index.php?topic=501140>

Question 2258

An agonist is a muscle that provides most of the force required for a given movement.

Answer: <https://biology-forums.com/index.php?topic=500252>

Question 2259

Discuss the clinical significance of the xiphoid process.

Answer: <https://biology-forums.com/index.php?topic=498947>

Question 2260

The cerebellum functions in:

- A) the planning and coordination of movement.
- B) learning, memory, and personality.
- C) biological rhythms.
- D) homeostatic functions such as breathing and heart rate.

Answer: <https://biology-forums.com/index.php?topic=500501>

Question 2261

The digestion of food is exergonic since chemical bonds are broken and energy is released.

Answer: <https://biology-forums.com/index.php?topic=498374>

Question 2262

Both the sympathetic and parasympathetic nervous systems innervate the salivary glands and can increase saliva production.

Answer: <https://biology-forums.com/index.php?topic=501723>

Question 2263

The three germ layers are the endoderm, mesoderm, and ectoderm.

Answer: <https://biology-forums.com/index.php?topic=511381>

Question 2264

The hypothalamic-hypophyseal portal system is a special blood supply that provides a connection between the hypothalamus and the pituitary gland.

Answer: <https://biology-forums.com/index.php?topic=501031>

Question 2265

In physical education class, Miguel is performing jumping jacks. He abducts his arms and thighs in unison, and then adducts them. Determine the muscles responsible for abduction and adduction of the arms and thighs.

Answer: <https://biology-forums.com/index.php?topic=500285>

Question 2266

Society values cleanliness as evidenced by our frequent washing, and the volume of creams, conditions, lotions, and moisturizers we buy. What secretion are we removing with frequent washing and why is that secretion important for the skin?

Answer: <https://biology-forums.com/index.php?topic=498738>

Question 2267

Summarize the main functions of aldosterone.

Answer: <https://biology-forums.com/index.php?topic=501052>

Question 2268

Explain how to determine the atomic number and mass number for an atom.

Answer: <https://biology-forums.com/index.php?topic=498350>

Question 2269

Proprioceptors are located in the musculoskeletal system where they detect the movement and position of a joint or body part.

Answer: <https://biology-forums.com/index.php?topic=500695>

Question 2270

Which pharynx region is lined with pseudostratified ciliated columnar epithelium?

- A) laryngopharynx
- B) oropharynx
- C) nasopharynx
- D) both oropharynx and laryngopharynx

Answer: <https://biology-forums.com/index.php?topic=501544>

Question 2271

Why are chlorine ions important?

- A) Chlorine ions are a major component of collagen fibers.
- B) Chlorine ions are a major component of bone tissues.
- C) Chlorine ions are involved in the production of stomach acids.
- D) Chlorine ions are critical for hematopoiesis.

Answer: <https://biology-forums.com/index.php?topic=502037>

Question 2272

Which of the following is an effect of myelination?

- A) Myelination increases the rate at which phagocytosis occurs in the brain.
- B) Myelination increases the speed of conduction of action potentials.
- C) Myelination increases the rate of mitosis in damaged neurons.
- D) Myelination increases the volume of cerebrospinal fluid in circulation.

Answer: <https://biology-forums.com/index.php?topic=500411>

Question 2273

Classify these joints to the correct structural classification: sutures, syndesmoses, and gomphoses.

- A) cartilaginous
- B) fibrous
- C) synovial
- D) amphiarthrosis

Answer: <https://biology-forums.com/index.php?topic=498971>

Question 2274

How do cardiac cells sustain a membrane potential of around 0 mV during the long plateau phase?

- A) Calcium channels remain open.
- B) increased membrane permeability to potassium ions
- C) decrease in the amount of calcium diffusing across the membrane
- D) increased membrane permeability to sodium ions

Answer: <https://biology-forums.com/index.php?topic=501110>

Question 2275

In order for a male to inherit a sex-linked (X-linked) disorder, he must receive the allele from:

- A) his mother only.
- B) his father only.
- C) either his mother or father.
- D) both his mother and father.

Answer: <https://biology-forums.com/index.php?topic=511374>

Question 2276

What mucosa-associated lymphatic tissue (MALT) traps pathogens entering the nasal and oral cavities?

- A) lymph nodes
- B) tonsils
- C) Peyer's patches
- D) appendix

Answer: <https://biology-forums.com/index.php?topic=501406>

Question 2277

Predict the movement of water between the cytosol of a cell and hypertonic plasma.

Answer: <https://biology-forums.com/index.php?topic=511176>

Question 2278

Bacterial infections and viral infections progress through an identical sequence of events during the immune response.

Answer: <https://biology-forums.com/index.php?topic=501503>

Question 2279

What is net filtration pressure (NFP) in the glomerular capillaries, in mm Hg?

- A) -5
- B) 0
- C) 10
- D) 25

Answer: <https://biology-forums.com/index.php?topic=501915>

Question 2280

What cells clean and digest debris entering the alveoli?

- A) type I alveolar cells
- B) goblet cells
- C) type II alveolar cells
- D) alveolar macrophages

Answer: <https://biology-forums.com/index.php?topic=501555>

Question 2281

Predict the effect of a 101°F fever on reaction rate.

Answer: <https://biology-forums.com/index.php?topic=498359>

Question 2282

What tissue composes the reticular layer of the dermis?

- A) hyaline cartilage.
- B) loose connective tissue
- C) dense regular connective tissue
- D) dense irregular connective tissue

Answer: <https://biology-forums.com/index.php?topic=498678>

Question 2283

Cytokinesis and mitosis are two parts of the M phase of the cell cycle overlapping.

Answer: <https://biology-forums.com/index.php?topic=498500>

Question 2284

Which of the following promotes bone resorption?

- A) compression
- B) tension
- C) pressure
- D) calcium-rich diet

Answer: <https://biology-forums.com/index.php?topic=498792>

Question 2285

Which of the following must occur first in a reflex arc?

- A) delivery of motor response to effector
- B) detection by receptor and delivery of stimulus
- C) integration in the central nervous system (CNS)
- D) transmission from the primary motor cortex

Answer: <https://biology-forums.com/index.php?topic=500677>

Question 2286

Splanchnic circulation involves the blood supply that feeds and drains:

- A) abdominal reproductive organs.
- B) thoracic digestive organs.
- C) thoracic cardiovascular organs.
- D) abdominal digestive organs.

Answer: <https://biology-forums.com/index.php?topic=501652>

Question 2287

A seventy-five year old male has noticed he has had difficulty urinating. His physician says his difficulty is most likely due to an enlarged gland known as the:

- A) epididymis.
- B) prostate gland.
- C) bulbourethral gland.
- D) seminal vesicle.

Answer: <https://biology-forums.com/index.php?topic=511215>

Question 2288

The hippocampus and amygdala are parts of the:

- A) reticular formation.
- B) limbic system.
- C) caudate nucleus.
- D) globus pallidus.

Answer: <https://biology-forums.com/index.php?topic=500530>

Question 2289

Which mechanoreceptor detects deep pressure?

- A) Merkel cell fiber
- B) lamellated corpuscle
- C) Ruffini ending
- D) tactile corpuscle

Answer: <https://biology-forums.com/index.php?topic=500660>

Question 2290

The central sulcus separates the frontal lobe from the parietal lobe of the cerebrum.

Answer: <https://biology-forums.com/index.php?topic=500579>

Question 2291

Thin skin lacks stratum:

- A) corneum.
- B) granulosum.
- C) lucidum.
- D) spinosum.

Answer: <https://biology-forums.com/index.php?topic=498671>

Question 2292

Which of the following should NOT cross the blood-brain barrier with ease?

- A) carbon dioxide
- B) glucose
- C) large, polar molecules
- D) lipid-based molecules

Answer: <https://biology-forums.com/index.php?topic=500542>

Question 2293

If a drug is administered to block the heart's adrenergic receptors, how is heart rate affected during exercise?

- A) Heart rate will be unable to increase in response to exercise.
- B) Heart rate will increase in response to the drug.
- C) The heart will stop beating.
- D) The drug has no effect on heart rate during exercise.

Answer: <https://biology-forums.com/index.php?topic=500751>

Question 2294

Explain how restrictive disease patterns differ from obstructive disease patterns.

Answer: <https://biology-forums.com/index.php?topic=501622>

Question 2295

Describe the Frank-Starling law.

Answer: <https://biology-forums.com/index.php?topic=501184>

Question 2296

Explain how a reticulocyte differs from an erythrocyte.

Answer: <https://biology-forums.com/index.php?topic=501377>

Question 2297

List and describe the five anatomical regions of the stomach.

Answer: <https://biology-forums.com/index.php?topic=501739>

Question 2298

A patient with Crohn's disease recently had his ileum removed. His doctor has monitored his vitamin B12 levels; vitamin B12 binds intrinsic factor in the stomach. Determine why levels of this vitamin are a concern.

Answer: <https://biology-forums.com/index.php?topic=501757>

Question 2299

What type of muscle performs an anchoring function by holding a bone in place?

- A) antagonist
- B) fixator
- C) agonist
- D) synergist

Answer: <https://biology-forums.com/index.php?topic=500189>

Question 2300

Explain the roles of the parasympathetic and sympathetic nervous systems in the basic phases of the male sexual response, erection and ejaculation.

Answer: <https://biology-forums.com/index.php?topic=511274>

Question 2301

What cells compose the liver lobules?

- A) parietal cells
- B) chief cells
- C) hepatocytes
- D) acinar cells

Answer: <https://biology-forums.com/index.php?topic=501703>

Question 2302

The five major taste sensations are sweet, salty, bitter, sour, and umami.

Answer: <https://biology-forums.com/index.php?topic=500904>

Question 2303

Thoracic vertebrae have holes in their transverse processes known as transverse foramina for the passage of blood vessels.

Answer: <https://biology-forums.com/index.php?topic=498928>

Question 2304

Place in order from superficial to deep the three tunics of a typical blood vessel.

- A) tunica externa, tunica media, tunica intima
- B) tunica intima, tunica media, tunica externa
- C) tunica media, tunica intima, tunica externa
- D) tunica externa, tunica intima, tunica media

Answer: <https://biology-forums.com/index.php?topic=501193>

Question 2305

Which fiber type helps Frances stand for hours in her job as a nurse?

- A) type I fiber
- B) type IIa fiber
- C) type IIb fiber
- D) type IIc fiber

Answer: <https://biology-forums.com/index.php?topic=500331>

Question 2306

Relate the speed of conduction of an action potential to myelination.

Answer: <https://biology-forums.com/index.php?topic=500480>

Question 2307

A recreational drug known as ecstasy (MDMA) can cause a user to experience a fever and disturbed thirst and hunger. Determine the specific brain region affected by this drug. What other functions might be impaired?

Answer: <https://biology-forums.com/index.php?topic=500615>

Question 2308

Which of the following best describes secondary active transport?

- A) Secondary active transport occurs when one substance is coupled with the passive transport of a second substance.
- B) Secondary active transport involves the movement of water by osmosis into a cell.
- C) Secondary active transport involves the movement of a substance into a cell with its concentration gradient.
- D) Secondary active transport involves the movement of a substance into a cell through a protein channel with its concentration gradient.

Answer: <https://biology-forums.com/index.php?topic=498421>

Question 2309

Place the following steps in the correct order for transduction of a chemical odorant into a nerve signal.

1. Odorants reach receptors in the cilia of olfactory neurons.
2. cAMP opens ion channels that allow sodium and calcium ions to enter the cell.
3. The G-protein activates an enzyme, adenylate cyclase, to convert ATP into cyclic AMP (cAMP).
4. The binding of an odorant activates a G-protein which then detaches from the receptor.
5. The membrane is depolarized. Depolarization that reaches threshold at the axon hillock triggers an action potential and transduction has been achieved.

- A) 1, 4, 3, 2, 5
- B) 1, 2, 3, 4, 5
- C) 1, 3, 4, 2, 5
- D) 1, 4, 2, 3, 5

Answer: <https://biology-forums.com/index.php?topic=500832>

Question 2310

Cerebrospinal fluid (CSF) in the third ventricle will drain into the:

- A) lateral ventricles.
- B) fourth ventricle.
- C) choroid plexus.
- D) dural sinus.

Answer: <https://biology-forums.com/index.php?topic=500533>

Question 2311

The free surface of an epithelial tissue is the:

- A) basal lamina.
- B) apical surface.
- C) basement membrane.
- D) reticular lamina.

Answer: <https://biology-forums.com/index.php?topic=498556>

Question 2312

Which of the following counteracts the movement of bicarbonate ions from the RBCs?

- A) the Bohr effect

- B) Dalton's law
- C) the chloride shift
- D) ventilation-perfusion matching

Answer: <https://biology-forums.com/index.php?topic=501591>

Question 2313

What part of the brain is involved in thermoregulation?

- A) midbrain
- B) pons
- C) hypothalamus
- D) thalamus

Answer: <https://biology-forums.com/index.php?topic=501822>

Question 2314

Which cell has receptors specialized to detect different tastes?

- A) olfactory cell
- B) supporting cell
- C) basal cell
- D) gustatory cell

Answer: <https://biology-forums.com/index.php?topic=500836>

Question 2315

When walking, which muscle flexes your forearm?

- A) brachioradialis
- B) deltoid
- C) teres major
- D) triceps brachii

Answer: <https://biology-forums.com/index.php?topic=500247>

Question 2316

Which of the following secretes antibodies?

- A) antigen-presenting cells
- B) plasma cells
- C) dendritic cells
- D) memory B cells

Answer: <https://biology-forums.com/index.php?topic=501448>

Question 2317

To make a gallon of lemonade, Emily mixed sugar with water until it dissolved. Did she create a solution, a suspension, or a colloid? Explain.

Answer: <https://biology-forums.com/index.php?topic=498352>

Question 2318

Describe three functions of proteins found in the plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=498471>

Question 2319

What is the most numerous cell type in the epidermis?

- A) keratinocyte
- B) dendritic (Langerhans) cell
- C) melanocyte
- D) Merkel cell

Answer: <https://biology-forums.com/index.php?topic=498661>

Question 2320

Cholinergic synapses use the neurotransmitter:

- A) acetylcholine.
- B) serotonin.
- C) norepinephrine.
- D) epinephrine.

Answer: <https://biology-forums.com/index.php?topic=500454>

Question 2321

What process starts at the embryonic period?

- A) formation of the blastula
- B) gastrulation
- C) fertilization
- D) implantation

Answer: <https://biology-forums.com/index.php?topic=511319>

Question 2322

What is a good way to manage time in preparation for your anatomy and physiology class?

- A) I should delay studying until the day or two before the test to best remember the material.
- B) I should stay up all night the night before the test to maximize what is stored in short-term memory.
- C) I study only on the weekends when I have many hours of free time.
- D) I make a schedule and budget my time.

Answer: <https://biology-forums.com/index.php?topic=498163>

Question 2323

The pre-embryonic period starts with a process called gastrulation.

Answer: <https://biology-forums.com/index.php?topic=511380>

Question 2324

What stimulates the secretion of sebum?

- A) high temperatures
- B) sex hormones
- C) UV radiation
- D) low temperatures

Answer: <https://biology-forums.com/index.php?topic=498699>

Question 2325

Determine the correct order of the structure of the filtration membrane from deep to superficial.

- A) basal lamina, podocytes, fenestrated glomerular capillary endothelial cells
- B) fenestrated glomerular capillary endothelial cells, basal lamina, podocytes
- C) podocytes, basal lamina, fenestrated glomerular capillary endothelial cells
- D) fenestrated glomerular capillary endothelial cells, podocytes, basal lamina

Answer: <https://biology-forums.com/index.php?topic=501908>

Question 2326

Correctly order the following key steps in the process of endochondral ossification.

1. Chondrocytes die.
2. Osteoblasts build the bone collar on the external surface of the bone.
3. Perichondrium is invaded by blood vessels.
4. In the primary ossification center, osteoblasts replace calcified cartilage with early spongy bone.
5. Perichondrial cells differentiate into osteogenic cells then into osteoblasts.

- A) 3, 5, 2, 1, 4
- B) 3, 1, 2, 3, 5
- C) 3, 1, 4, 5, 2
- D) 4, 3, 2, 1, 5

Answer: <https://biology-forums.com/index.php?topic=498779>

Question 2327

Testosterone is produced by the:

- A) hypothalamus.
- B) anterior pituitary.
- C) posterior pituitary.
- D) testes.

Answer: <https://biology-forums.com/index.php?topic=501020>

Question 2328

Giada experienced damage to a sensory neuron in the PNS. Which neuron sustained damage?

- A) first-order neuron
- B) interneuron
- C) third-order neuron
- D) second-order neuron

Answer: <https://biology-forums.com/index.php?topic=500554>

Question 2329

Which of the following is an excess accumulation of interstitial fluid?

- A) hypocalcemia
- B) hypovolemia
- C) edema
- D) dehydration

Answer: <https://biology-forums.com/index.php?topic=502018>

Question 2330

Which of the following veins does NOT drain directly into the inferior vena cava?

- A) hepatic vein
- B) renal vein
- C) common iliac vein
- D) hepatic portal vein

Answer: <https://biology-forums.com/index.php?topic=501257>

Question 2331

What leads to respiratory acidosis?

- A) hyperventilation
- B) increasing secretion of hydrogen ions into the filtrate
- C) increasing reabsorption of bicarbonate ions from the filtrate
- D) hypoventilation

Answer: <https://biology-forums.com/index.php?topic=511134>

Question 2332

Ionic compounds dissociate in water into:

- A) polar and nonpolar substances.
- B) hydrophilic and hydrophobic substances.
- C) electrolytes.
- D) acids and bases.

Answer: <https://biology-forums.com/index.php?topic=498328>

Question 2333

Can hormones target all cells of the body? Explain.

Answer: <https://biology-forums.com/index.php?topic=501039>

Question 2334

What is NOT a symptom of hyperthyroidism?

- A) heat intolerance
- B) increased blood pressure
- C) slow heart rate
- D) weight loss

Answer: <https://biology-forums.com/index.php?topic=500982>

Question 2335

What is the correct pathway of development of the cerebellum?

- A) neural tube, midbrain, mesencephalon, cerebellum
- B) neural tube, forebrain, telencephalon, cerebellum
- C) neural tube, diencephalon, cerebellum
- D) neural tube, hindbrain, metencephalon, cerebellum

Answer: <https://biology-forums.com/index.php?topic=500505>

Question 2336

Which of the following carries sensory information only?

- A) posterior (dorsal) root
- B) anterior root
- C) posterior ramus
- D) anterior ramus

Answer: <https://biology-forums.com/index.php?topic=500643>

Question 2337

The functional units of the kidneys are:

- A) renal pyramids.
- B) renal sinuses.
- C) nephrons.
- D) glomeruli.

Answer: <https://biology-forums.com/index.php?topic=501886>

Question 2338

If two alleles code for the same trait (such as blond hair), they are said to be:

- A) autologous.
- B) homozygous.
- C) heterozygous.
- D) homologous.

Answer: <https://biology-forums.com/index.php?topic=511368>

Question 2339

Nora was exposed to radiation that caused her red bone marrow to make fewer red blood cells. This condition is known as:

- A) aplastic anemia.
- B) iron-deficiency anemia.
- C) sickle cell anemia.
- D) hemolytic anemia.

Answer: <https://biology-forums.com/index.php?topic=501327>

Question 2340

How do parasympathetic neurons in the medulla respond to increased blood pressure?

- A) Cardiac output is increased.
- B) Heart rate is increased.
- C) Vasoconstriction is promoted.
- D) Sympathetic activity is inhibited.

Answer: <https://biology-forums.com/index.php?topic=501222>

Question 2341

What is the largest artery in the body?

- A) left subclavian artery
- B) aorta
- C) left common carotid artery
- D) pulmonary trunk

Answer: <https://biology-forums.com/index.php?topic=501243>

Question 2342

The Na⁺/K⁺ pump helps a muscle cell maintain a state of:

- A) resting membrane potential.
- B) action potential.
- C) propagation.
- D) depolarization.

Answer: <https://biology-forums.com/index.php?topic=500305>

Question 2343

A drug inhibits the work of ATP synthase. Determine the effect on chemiosmosis.

- A) ATP production would increase rapidly.
- B) Oxygen would no longer be required for ATP production.
- C) ATP production would stop.
- D) Carbon dioxide would no longer be made as a result of ATP production.

Answer: <https://biology-forums.com/index.php?topic=501786>

Question 2344

Mary's stroke left her unable to swallow. What specialized type of propulsion was affected?

- A) mastication
- B) deglutition
- C) segmentation
- D) salivation

Answer: <https://biology-forums.com/index.php?topic=501665>

Question 2345

Which organ traps older erythrocytes so they will be removed from circulation?

- A) pancreas
- B) gallbladder
- C) spleen
- D) stomach

Answer: <https://biology-forums.com/index.php?topic=501324>

Question 2346

What type of neuron contacts a muscle fiber and initiates a muscle contraction?

- A) sensory neuron
- B) upper motor neuron
- C) interneuron
- D) lower motor neuron

Answer: <https://biology-forums.com/index.php?topic=500672>

Question 2347

Archie has a resting heart rate of 125 beats per minute. Classify his cardiac dysrhythmia.

- A) tachycardia
- B) asystole
- C) bradycardia
- D) heart block

Answer: <https://biology-forums.com/index.php?topic=501129>

Question 2348

Melatonin appears to adjust the sleep phase of the sleep/wake cycle of some people.

Answer: <https://biology-forums.com/index.php?topic=501038>

Question 2349

What is NOT a function of the reticular formation?

- A) memory
- B) sleep
- C) breathing
- D) pain transmission

Answer: <https://biology-forums.com/index.php?topic=500531>

Question 2350

According to the principle of complementarity of structure and function, structure and function are related only at the cellular level.

Answer: <https://biology-forums.com/index.php?topic=498227>

Question 2351

What creates the mesentery?

- A) greater omentum
- B) muscularis externa

- C) visceral peritoneum
- D) parietal peritoneum

Answer: <https://biology-forums.com/index.php?topic=501651>

Question 2352

Which of the following is NOT a muscle of respiration?

- A) diaphragm
- B) external intercostal
- C) internal intercostal
- D) external oblique

Answer: <https://biology-forums.com/index.php?topic=500216>

Question 2353

What system is responsible for the most common route of water loss from the body?

- A) urinary system
- B) digestive system
- C) respiratory system
- D) integumentary system

Answer: <https://biology-forums.com/index.php?topic=502005>

Question 2354

Describe the organization of the pH scale, including the locations of acids, bases, and neutral chemicals.

Answer: <https://biology-forums.com/index.php?topic=498362>

Question 2355

Capillaries in the brain are unique from other capillaries as they have more tight junctions and limit endocytosis and exocytosis.

Answer: <https://biology-forums.com/index.php?topic=500586>

Question 2356

From what do both lanugo and the vernix caseosa protect the fetus?

- A) blood
- B) urine
- C) amniotic fluid
- D) fat

Answer: <https://biology-forums.com/index.php?topic=511339>

Question 2357

What results when the corpus callosum is cut?

- A) communication between a cerebral cortex in one hemisphere with other areas of the same hemisphere would be impaired
- B) communication between the right and left cerebral hemispheres would be impaired
- C) communication between the brain and spinal cord would be impaired
- D) communication within a single brain hemisphere would be impaired

Answer: <https://biology-forums.com/index.php?topic=500518>

Question 2358

The only movable bone of the adult skull is the:

- A) temporal bone.
- B) lacrimal bone.
- C) vomer bone.
- D) mandible.

Answer: <https://biology-forums.com/index.php?topic=498871>

Question 2359

Barrier methods of birth control prevent sperm from moving beyond the vagina and include condoms, diaphragms, cervical caps, and the sponge.

Answer: <https://biology-forums.com/index.php?topic=511266>

Question 2360

Which regions of the abdominopelvic cavity are situated medially?

- A) right and left hypochondriac regions, and the epigastric region

- B) right hypochondriac, right lumbar, and right iliac (inguinal) regions
C) right and left lumbar regions and the umbilical region
D) epigastric, umbilical, hypogastric regions

Answer: <https://biology-forums.com/index.php?topic=498197>

Question 2361

How many net ATP are produced as a result of glycolysis?

- A) 2 ATP
B) 4 ATP
C) 8 ATP
D) 12 ATP

Answer: <https://biology-forums.com/index.php?topic=501776>

Question 2362

Summarize how the special senses and general senses differ.

Answer: <https://biology-forums.com/index.php?topic=500915>

Question 2363

Predict the effects on valve function and blood flow through the heart for a patient who has ruptured chordae tendineae that anchor the mitral valve.

Answer: <https://biology-forums.com/index.php?topic=501173>

Question 2364

What gelatinous mass helps maintain the shape of the eyeball?

- A) perilymph
B) aqueous humor
C) ora serrata
D) vitreous humor

Answer: <https://biology-forums.com/index.php?topic=500856>

Question 2365

The teeth are involved in mechanical digestion as they are the major organs of mastication.

Answer: <https://biology-forums.com/index.php?topic=501722>

Question 2366

Which lobe is situated posteriorly in each cerebral hemisphere?

- A) temporal
B) occipital
C) parietal
D) frontal

Answer: <https://biology-forums.com/index.php?topic=500510>

Question 2367

How many phalangeal bones are in each hand?

- A) 7
B) 12
C) 14
D) 19

Answer: <https://biology-forums.com/index.php?topic=498903>

Question 2368

The terminal portion of the large intestine is the rectum.

Answer: <https://biology-forums.com/index.php?topic=501731>

Question 2369

Place these steps of the action potential in the correct order.

1. Sodium ions channels return to the resting state and repolarization continues.
2. Voltage-gated sodium ion channels activate, sodium ions enter, and the axon section depolarizes.
3. As potassium ion channels return to resting state, the axolemma may hyperpolarize before returning to the resting membrane potential.
4. A local potential depolarizes the axolemma of the trigger zone to threshold.

5. Sodium ion channels inactivate, and voltage-gated potassium ion channels activate, so sodium ions stop entering and potassium ions leave, beginning repolarization.

- A) 4, 2, 3, 5, 1
- B) 4, 2, 5, 1, 3
- C) 4, 2, 1, 3, 5
- D) 2, 4, 5, 1, 3

Answer: <https://biology-forums.com/index.php?topic=500429>

Question 2370

Describe the roles of contractile and regulatory proteins in the myofibril.

Answer: <https://biology-forums.com/index.php?topic=500344>

Question 2371

Simple cuboidal epithelium is built for:

- A) prevention of water loss through the skin.
- B) absorption or secretion.
- C) protection from mechanical stresses.
- D) distensibility.

Answer: <https://biology-forums.com/index.php?topic=498562>

Question 2372

Which vessels vasoconstrict in response to epinephrine and norepinephrine?

- A) venules
- B) coronary arterioles
- C) capillaries
- D) systemic arterioles

Answer: <https://biology-forums.com/index.php?topic=501218>

Question 2373

Where would a gliding movement most likely occur?

- A) between the intercarpal joints of the wrist
- B) atlantoaxial joint in the neck
- C) elbow joint
- D) hip joint

Answer: <https://biology-forums.com/index.php?topic=498996>

Question 2374

Would you expect scar tissue to be found in bone? Explain.

Answer: <https://biology-forums.com/index.php?topic=498628>

Question 2375

To increase sweat production from sweat glands, acetylcholine binds:

- A) muscarinic receptors.
- B) beta receptors.
- C) nicotinic receptors.
- D) adrenergic receptors.

Answer: <https://biology-forums.com/index.php?topic=500763>

Question 2376

Fenestrations in capillaries are small pores that allow water and small substances to move freely through these pores.

Answer: <https://biology-forums.com/index.php?topic=501271>

Question 2377

Histology is the study of:

- A) cells.
- B) tissues.
- C) atoms.
- D) diseases.

Answer: <https://biology-forums.com/index.php?topic=498548>

Question 2378

List and summarize the three pressures that contribute to create glomerular net filtration pressure (NFP).

Answer: <https://biology-forums.com/index.php?topic=501959>

Question 2379

Explain where the pericardial cavity is situated in relation to the pericardial membranes.

Answer: <https://biology-forums.com/index.php?topic=498248>

Question 2380

Hydrogen ion secretion leads to bicarbonate ions reabsorption in order to maintain proper blood pH balance.

Answer: <https://biology-forums.com/index.php?topic=501980>

Question 2381

When one molecule of glucose is completely oxidized, then the overall energy gain by the cell is 38 ATP.

Answer: <https://biology-forums.com/index.php?topic=501843>

Question 2382

What does Boyle's law state about pressure and volume at a constant temperature and a constant pressure?

- A) Pressure increases when volume decreases.
- B) Pressure and volume will both increase together or both decrease together.
- C) Pressure and volume will both increase as temperature and pressure increase.
- D) Pressure and volume will both decrease as temperature and pressure decrease.

Answer: <https://biology-forums.com/index.php?topic=501562>

Question 2383

Taste is detected when chemicals bind receptors on the microvilli of:

- A) basal cells.
- B) supporting cells.
- C) gustatory cells.
- D) olfactory cells.

Answer: <https://biology-forums.com/index.php?topic=500837>

Question 2384

Tetracycline is an antibiotic used to treat infections. It binds with bacterial ribosomes and inhibits the tRNA molecule from binding to the ribosome.

What process is interrupted?

- A) translation
- B) replication
- C) transcription
- D) mitosis

Answer: <https://biology-forums.com/index.php?topic=498452>

Question 2385

Ketoacidosis is a critical part of ATP synthesis when fatty acids are used for fuel.

Answer: <https://biology-forums.com/index.php?topic=501845>

Question 2386

From what part of a triglyceride are ketone bodies produced?

- A) NADH
- B) acetyl-CoA
- C) glyceraldehyde-3-phosphate
- D) glycerol

Answer: <https://biology-forums.com/index.php?topic=501793>

Question 2387

Which extraembryonic membrane forms the embryonic part of the placenta?

- A) allantois
- B) chorion

- C) amnion
- D) yolk sac

Answer: <https://biology-forums.com/index.php?topic=511313>

Question 2388

Which statement best describes primary bone?

- A) Primary bone is stronger than secondary bone since it contains many lamellae.
- B) Primary bone contains a higher percentage of inorganic matrix than secondary bone.
- C) Primary bone contains abundant osteocytes and little inorganic matrix.
- D) Primary bone has regularly arranged parallel bundles of collagen fibers for strength.

Answer: <https://biology-forums.com/index.php?topic=498771>

Question 2389

Explain the difference between a monosynaptic reflex and a polysynaptic reflex.

Answer: <https://biology-forums.com/index.php?topic=500722>

Question 2390

In a sarcomere, the light and dark bands are produced by alternating M lines and Z discs.

Answer: <https://biology-forums.com/index.php?topic=500367>

Question 2391

Explain how oxyhemoglobin differs from deoxyhemoglobin.

Answer: <https://biology-forums.com/index.php?topic=501376>

Question 2392

Sensory receptors that adapt to stimuli after a certain period of time are:

- A) thermoreceptors.
- B) rapidly adapting receptors.
- C) nociceptors.
- D) slowly adapting receptors.

Answer: <https://biology-forums.com/index.php?topic=500655>

Question 2393

Which cells participate in the process of bone deposition?

- A) osteoblasts
- B) osteocytes
- C) osteoclasts
- D) lacuna

Answer: <https://biology-forums.com/index.php?topic=498759>

Question 2394

What part of scapula articulates with the clavicle?

- A) infraspinous fossa
- B) acromion
- C) glenoid cavity
- D) coracoid process

Answer: <https://biology-forums.com/index.php?topic=498893>

Question 2395

Identify the hormones responsible for increasing sodium ion retention.

- A) angiotensin-II and atrial natriuretic peptide (ANP)
- B) aldosterone and antidiuretic hormone (ADH)
- C) angiotensin-II and aldosterone
- D) vitamin D3 (calcitriol) and parathyroid hormone (PTH)

Answer: <https://biology-forums.com/index.php?topic=502021>

Question 2396

The union of the radial and ulnar veins forms the:

- A) basilic vein.

- B) brachial vein.
- C) axillary vein.
- D) median cubital vein.

Answer: <https://biology-forums.com/index.php?topic=501260>

Question 2397

The stretch of a full urinary bladder is detected by a(n):

- A) exteroceptor.
- B) photoreceptor.
- C) interoceptor.
- D) thermoreceptor.

Answer: <https://biology-forums.com/index.php?topic=500656>

Question 2398

Based on your knowledge of splanchnic circulation, determine why a patient who has been diagnosed with colon cancer may need to be checked for liver cancer.

Answer: <https://biology-forums.com/index.php?topic=501752>

Question 2399

Briefly explain how mitosis and meiosis differ.

Answer: <https://biology-forums.com/index.php?topic=511269>

Question 2400

Mrs. Frykholm is experiencing diabetic ketoacidosis, which causes metabolic acidosis. She has experienced damage to her kidneys from diabetes mellitus. Predict how her body compensates to return her blood pH to normal.

- A) hyperventilation
- B) hypoventilation
- C) decreasing bicarbonate ion reabsorption by the kidneys
- D) decreasing hydrogen ion secretion into the filtrate

Answer: <https://biology-forums.com/index.php?topic=511137>

Question 2401

What are the two steps of protein synthesis that produce a protein from a gene?

- A) transcription and translation
- B) replication and translation
- C) mitosis and cytokinesis
- D) replication and transcription

Answer: <https://biology-forums.com/index.php?topic=498451>

Question 2402

Where are color, object movement, and depth processed?

- A) precentral gyrus
- B) premotor cortex
- C) auditory association cortex
- D) visual association areas

Answer: <https://biology-forums.com/index.php?topic=500513>

Question 2403

The degree of stretch experienced by the sarcomeres in the ventricle cells before they contract is called:

- A) afterload.
- B) contractility.
- C) stroke volume.
- D) preload.

Answer: <https://biology-forums.com/index.php?topic=501148>

Question 2404

Carbon dioxide has a relatively high solubility in blood plasma although it has a very low partial pressure. What law describes this phenomenon?

- A) Dalton's law
- B) Boyle's law

- C) Henry's law
- D) Charles' law

Answer: <https://biology-forums.com/index.php?topic=501577>

Question 2405

Explain how red bone marrow and yellow bone marrow differ structurally.

Answer: <https://biology-forums.com/index.php?topic=498817>

Question 2406

What normally serves as the pacemaker of the entire heart?

- A) Purkinje fiber system
- B) atrioventricular (AV) bundle
- C) atrioventricular (AV) node
- D) sinoatrial (SA) node

Answer: <https://biology-forums.com/index.php?topic=501116>

Question 2407

The innermost shell of an atom holds:

- A) 2 electrons.
- B) 6 electrons.
- C) 2 protons.
- D) 8 electrons.

Answer: <https://biology-forums.com/index.php?topic=498275>

Question 2408

Select the appropriate directional term to complete this sentence: The mouth is _____ to the nose.

- A) posterior (dorsal)
- B) inferior (caudal)
- C) superior (cranial)
- D) distal

Answer: <https://biology-forums.com/index.php?topic=498183>

Question 2409

What provides a hard, continuous surface for the epidermis of the cutaneous membrane?

- A) cilia
- B) collagen
- C) keratin
- D) mucus

Answer: <https://biology-forums.com/index.php?topic=498606>

Question 2410

The reticular formation can only function with input from the hypothalamus.

Answer: <https://biology-forums.com/index.php?topic=500804>

Question 2411

When is fibrin produced during the coagulation cascade?

- A) intrinsic pathway
- B) extrinsic pathway
- C) common pathway
- D) both intrinsic and extrinsic pathways

Answer: <https://biology-forums.com/index.php?topic=501353>

Question 2412

Primary ossification centers develop in long bones in the:

- A) epiphyses.
- B) diaphysis.
- C) periosteum.
- D) articular cartilage.

Answer: <https://biology-forums.com/index.php?topic=498774>

Question 2413

Which subatomic particle carries a negative charge?

- A) proton
- B) neutron
- C) electron
- D) nucleus

Answer: <https://biology-forums.com/index.php?topic=498273>

Question 2414

Which bones house teeth?

- A) vomer bone and ethmoid bone
- B) mandible and maxillary bones
- C) temporal bone and palatine bone
- D) zygomatic bone and palatine bone

Answer: <https://biology-forums.com/index.php?topic=498870>

Question 2415

A long-lasting high fever is a concern for denaturation of:

- A) enzymes.
- B) glycogen.
- C) phospholipids.
- D) saturated fats.

Answer: <https://biology-forums.com/index.php?topic=498345>

Question 2416

Explain the concept of autonomic tone.

Answer: <https://biology-forums.com/index.php?topic=500817>

Question 2417

The nerve agent, sarin, was developed during World War II to block the effects of acetylcholinesterase. Explain the effects of this nerve agent on the synapse.

Answer: <https://biology-forums.com/index.php?topic=500497>

Question 2418

The cusps of the atrioventricular valves attach directly to:

- A) papillary muscles.
- B) chordae tendineae.
- C) trabeculae carneae.
- D) pectinate muscles.

Answer: <https://biology-forums.com/index.php?topic=501096>

Question 2419

On average, blood pH is approximately:

- A) 7.1.
- B) 7.4.
- C) 7.6.
- D) 7.8.

Answer: <https://biology-forums.com/index.php?topic=498321>

Question 2420

Where does protein synthesis occur?

- A) ribosomes
- B) peroxisomes
- C) lysosomes
- D) mitochondria

Answer: <https://biology-forums.com/index.php?topic=498426>

Question 2421

Charlie is 55 years old and is 45 pounds overweight. Like most men of his age, he carries the weight in his abdomen and jokes about his "beer gut." Due to the extra weight, his spine is developing an abnormal curvature. Explain why the curvature of his spine is changing and name this condition.
Answer: <https://biology-forums.com/index.php?topic=498955>

Question 2422

What is the most superficial layer of the pericardial sac?

- A) fibrous pericardium
- B) parietal pericardium
- C) visceral pericardium
- D) epicardium

Answer: <https://biology-forums.com/index.php?topic=501081>

Question 2423

Which fetal hormone initiates labor?

- A) estrogen
- B) progesterone
- C) cortisol
- D) prolactin

Answer: <https://biology-forums.com/index.php?topic=511351>

Question 2424

Which of the following muscles does NOT adduct the thigh?

- A) adductor magnus
- B) gracilis
- C) pectineus
- D) rectus femoris

Answer: <https://biology-forums.com/index.php?topic=500234>

Question 2425

Predict the impact on the gag reflex when a person has a damaged vagus nerve.

Answer: <https://biology-forums.com/index.php?topic=500729>

Question 2426

Which of the following might trigger erythropoiesis?

- A) decreased tissue demand for oxygen
- B) an increased number of RBCs
- C) moving to a lower altitude
- D) Blood oxygen levels fall below normal.

Answer: <https://biology-forums.com/index.php?topic=501323>

Question 2427

Which of the following decreases heart rate?

- A) glucagon
- B) norepinephrine
- C) acetylcholine
- D) epinephrine

Answer: <https://biology-forums.com/index.php?topic=501153>

Question 2428

Which hormone, produced by the thyroid gland, works opposite to parathyroid hormone (PTH)?

- A) thyroid hormones
- B) estrogen
- C) testosterone
- D) calcitonin

Answer: <https://biology-forums.com/index.php?topic=498797>

Question 2429

Determine the series of hormonal events that leads to birth.

1. Oxytocin stimulates the placenta to secrete prostaglandins.

2. Fetal cortisol stimulates the placenta to secrete estrogen.
3. Prostaglandins dilate the cervix, and with oxytocin, increase the strength of uterine contractions.
4. The high estrogen level stimulates the uterus to form oxytocin receptors.

- A) 2, 4, 1, 3
B) 2, 4, 3, 1
C) 1, 3, 2, 4
D) 1, 4, 2, 3

Answer: <https://biology-forums.com/index.php?topic=511352>

Question 2430

What types of molecules undergo transamination? Briefly explain why transamination is necessary.

Answer: <https://biology-forums.com/index.php?topic=501863>

Question 2431

The most common leukocyte is the neutrophil while the least common leukocyte is the basophil.

Answer: <https://biology-forums.com/index.php?topic=501366>

Question 2432

When does the prenatal period begin?

- A) gestation
B) conception
C) birth
D) infancy

Answer: <https://biology-forums.com/index.php?topic=511296>

Question 2433

What enzyme catalyzes reactions that initiate carbohydrate digestion?

- A) pepsin
B) salivary amylase
C) trypsin
D) pancreatic amylase

Answer: <https://biology-forums.com/index.php?topic=501711>

Question 2434

What best describes fusiform skeletal muscle structure?

- A) Fusiform muscles are broad and taper to a single tendon.
B) Fusiform muscles have fascicles that feather out at one angle from a tendon.
C) Fusiform muscles may wrap around a bone or have a twisted appearance.
D) Fusiform muscles tend to be thicker in their belly and taper at their ends.

Answer: <https://biology-forums.com/index.php?topic=500182>

Question 2435

Which of the following statements about blood is FALSE?

- A) Blood performs immune functions.
B) Blood helps maintain body temperature.
C) Blood is more viscous than water.
D) Blood pH normally falls between 6.5 and 6.8.

Answer: <https://biology-forums.com/index.php?topic=501308>

Question 2436

What is NOT associated with a chemical synapse?

- A) gap junction
B) presynaptic neuron
C) synaptic cleft
D) neurotransmitter

Answer: <https://biology-forums.com/index.php?topic=500441>

Question 2437

Emulsification requires:

- A) bile salts.
- B) enzymes.
- C) nuclease.
- D) bile pigments.

Answer: <https://biology-forums.com/index.php?topic=501716>

Question 2438

Filtration occurs when colloid osmotic pressure is greater than capillary hydrostatic pressure.

Answer: <https://biology-forums.com/index.php?topic=501273>

Question 2439

Summarize the processes occurring during the postabsorptive state.

Answer: <https://biology-forums.com/index.php?topic=501869>

Question 2440

During sympathetic nervous system activity, what is NOT an effect of norepinephrine?

- A) the pancreas releases a hormone called glucagon
- B) blood glucose levels decrease
- C) lipids are broken down from adipocytes
- D) glucose is broken down from glycogen

Answer: <https://biology-forums.com/index.php?topic=500762>

Question 2441

Which tongue papillae lack taste buds?

- A) circumvallate
- B) foliate
- C) filiform
- D) fungiform

Answer: <https://biology-forums.com/index.php?topic=501657>

Question 2442

When the antidiuretic hormone (ADH) level rises, less water is reabsorbed via the kidneys, the ECF volume decreases, and urine production increases.

Answer: <https://biology-forums.com/index.php?topic=511152>

Question 2443

List the three layers of connective tissue covering the kidneys, from superficial to deep.

Answer: <https://biology-forums.com/index.php?topic=501952>

Question 2444

Pow! A firecracker explodes close to you. Your mouth drops open in surprise, a movement known as:

- A) reposition.
- B) retraction.
- C) opposition.
- D) depression.

Answer: <https://biology-forums.com/index.php?topic=499001>

Question 2445

Calcitonin functions to:

- A) stimulate osteoclast activity.
- B) increase bone deposition.
- C) increase blood calcium ion levels.
- D) stimulate bone resorption.

Answer: <https://biology-forums.com/index.php?topic=498798>

Question 2446

What type of capillaries have large pores within their endothelial cells and are the leakiest?

- A) sinusoidal capillaries
- B) continuous capillaries

- C) closed capillaries
- D) fenestrated capillaries

Answer: <https://biology-forums.com/index.php?topic=501230>

Question 2447

What is the most potent stimulus for bile production and the release of bile by the liver?

- A) vagus nerve
- B) cholecystokinin (CCK)
- C) secretin
- D) bile salt re-entry into the liver

Answer: <https://biology-forums.com/index.php?topic=501709>

Question 2448

Osteoblasts are immature cells that build bone and carry out the process of bone deposition.

Answer: <https://biology-forums.com/index.php?topic=498635>

Question 2449

Cellular swelling is likely to occur when blood cells are immersed in:

- A) isotonic solutions.
- B) hypotonic solutions.
- C) more concentrated solutions.
- D) hypertonic solutions.

Answer: <https://biology-forums.com/index.php?topic=498411>

Question 2450

Explain how T cell activation, proliferation, and differentiation are affected if a co-stimulator is unavailable.

Answer: <https://biology-forums.com/index.php?topic=501529>

Question 2451

A male visiting a health clinic presents with a pink rash all over the body, a fever, joint pain, and complains of some hair loss. Determine the sexually transmitted infection (STI) this patient has contracted.

- A) gonorrhea
- B) chlamydia
- C) genital herpes
- D) syphilis

Answer: <https://biology-forums.com/index.php?topic=511247>

Question 2452

Which of the following is NOT a mechanism used to return venous blood to the heart?

- A) respiratory pump
- B) venous valves
- C) skeletal muscle pump
- D) elastic fibers

Answer: <https://biology-forums.com/index.php?topic=501217>

Question 2453

Fourteen cranial bones and 8 facial bones form the skull.

Answer: <https://biology-forums.com/index.php?topic=498925>

Question 2454

The deltoid is responsible for:

- A) adducting the arm.
- B) abducting the arm.
- C) extending the humerus.
- D) medially rotating the humerus.

Answer: <https://biology-forums.com/index.php?topic=500227>

Question 2455

The vertebral and external jugular veins drain into the subclavian vein.

Answer: <https://biology-forums.com/index.php?topic=501274>

Question 2456

The majority of the body's energy is stored as:

- A) glucose.
- B) amino acids.
- C) triglycerides.
- D) glycogen.

Answer: <https://biology-forums.com/index.php?topic=501808>

Question 2457

Photoreceptors are found only in the:

- A) nose.
- B) ear.
- C) eye.
- D) mouth.

Answer: <https://biology-forums.com/index.php?topic=500658>

Question 2458

T cells and natural killer (NK) cells are largely involved in scanning the cells in the body for tumor antigens, a function known as:

- A) immune surveillance.
- B) complement.
- C) agglutination.
- D) vaccination.

Answer: <https://biology-forums.com/index.php?topic=501481>

Question 2459

What is located in the postcentral gyrus of the parietal lobe?

- A) primary auditory cortex
- B) primary somatosensory cortex
- C) primary visual cortex
- D) auditory association area

Answer: <https://biology-forums.com/index.php?topic=500516>

Question 2460

Gowoon wants to be a long-distance runner and participate in competitions on her high school track and field team. Describe the specific type of skeletal muscle fiber which will help her excel at her sport. What type of training should she perform to enhance the capabilities of this particular fiber type?

Answer: <https://biology-forums.com/index.php?topic=500387>

Question 2461

What do lacteals, located in the small intestine, collect?

- A) carbohydrates
- B) fat
- C) blood
- D) intracellular fluid

Answer: <https://biology-forums.com/index.php?topic=501401>

Question 2462

What is transported across a membrane during osmosis?

- A) water
- B) solutes
- C) salts
- D) sugars

Answer: <https://biology-forums.com/index.php?topic=498407>

Question 2463

Both preganglionic and postganglionic parasympathetic neurons release acetylcholine at their synapses.

Answer: <https://biology-forums.com/index.php?topic=500801>

Question 2464

What do most of the anterior rami of the thoracic spinal nerves serve?

- A) median nerves
- B) brachial nerves
- C) intercostal nerves
- D) phrenic nerves

Answer: <https://biology-forums.com/index.php?topic=500651>

Question 2465

Where should most of the potassium ions be located when a muscle cell is at rest?

- A) cytosol of the muscle cell
- B) extracellular fluid
- C) sarcoplasmic reticulum
- D) transverse tubules (T-tubules)

Answer: <https://biology-forums.com/index.php?topic=500304>

Question 2466

All cells in the epidermis arise from mitotic activity in stratum:

- A) basale.
- B) corneum.
- C) granulosum.
- D) lucidum.

Answer: <https://biology-forums.com/index.php?topic=498664>

Question 2467

Relatively inactive bone cells that help to maintain the ECM are:

- A) osteocytes.
- B) osteoblasts.
- C) osteogenic cells.
- D) osteoclasts.

Answer: <https://biology-forums.com/index.php?topic=498763>

Question 2468

Women who wish to become pregnant should have sexual intercourse after a surge in:

- A) androgens.
- B) progesterone.
- C) follicle-stimulating hormone (FSH).
- D) luteinizing hormone (LH).

Answer: <https://biology-forums.com/index.php?topic=511236>

Question 2469

Which artery supplies the small intestine with blood?

- A) hepatic artery
- B) inferior mesenteric artery
- C) superior mesenteric artery
- D) middle mesenteric artery

Answer: <https://biology-forums.com/index.php?topic=501248>

Question 2470

What stimulates the release of parathyroid hormone (PTH)?

- A) hypercalcemia
- B) cold temperatures
- C) hypocalcemia
- D) low basal metabolic rate

Answer: <https://biology-forums.com/index.php?topic=500986>

Question 2471

Electrical synapses are faster than chemical synapses due to the presence of gap junctions between cells.

Answer: <https://biology-forums.com/index.php?topic=500471>

Question 2472

The 16-cell stage is known as the:

- A) trophoblast.
- B) morula.
- C) blastomere.
- D) blastocyst.

Answer: <https://biology-forums.com/index.php?topic=511308>

Question 2473

An adult heart should have a:

- A) foramen ovale.
- B) ductus arteriosus.
- C) ductus venosus.
- D) ligamentum arteriosum.

Answer: <https://biology-forums.com/index.php?topic=511342>

Question 2474

Discuss the two main factors involved in the generation of a neuron's resting membrane potential.

Answer: <https://biology-forums.com/index.php?topic=500482>

Question 2475

Place the classes of vertebrae in order as they are situated in the vertebral column from superior to inferior.

1. cervical vertebrae
2. coccygeal vertebrae
3. lumbar vertebrae
4. sacral vertebrae
5. thoracic vertebrae

- A) 1, 5, 3, 4, 2
- B) 1, 5, 3, 2, 4
- C) 1, 3, 5, 4, 2
- D) 1, 3, 5, 2, 4

Answer: <https://biology-forums.com/index.php?topic=498877>

Question 2476

Motor learning occurs in the substantia nigra of the basal nuclei.

Answer: <https://biology-forums.com/index.php?topic=500593>

Question 2477

What statement best describes dense regular collagenous connective tissue?

- A) Dense regular collagenous connective tissue contains bundles of collagen fibers arranged haphazardly.
- B) Dense regular collagenous connective tissue contains parallel bundles of elastic fibers.
- C) Dense regular collagenous connective tissue is found in the dermis of the skin.
- D) Dense regular collagenous connective tissue forms tendons and ligaments.

Answer: <https://biology-forums.com/index.php?topic=498578>

Question 2478

Stratum lucidum is found in all types of skin covering the entire body.

Answer: <https://biology-forums.com/index.php?topic=498710>

Question 2479

Which of the following houses motor neurons?

- A) central canal of the spinal cord
- B) posterior root of spinal nerve
- C) posterior root ganglion
- D) anterior root of spinal nerve

Answer: <https://biology-forums.com/index.php?topic=500627>

Question 2480

Post-operative surgical patients are often fitted with pneumatic compression boots that increase the pressure around limbs, such as the legs. Determine the effect of these boots on blood flow in the limbs.

Answer: <https://biology-forums.com/index.php?topic=501295>

Question 2481

A neural tube defect known as anencephaly results in babies born without a telencephalon. Determine the brain functions that would be absent.

Answer: <https://biology-forums.com/index.php?topic=500614>

Question 2482

Which statement best describes the function of tubular reabsorption?

- A) Tubular reabsorption reclaims items from filtrate and returns them to the blood.
- B) Tubular reabsorption moves items from the peritubular capillary blood into the filtrate.
- C) Tubular reabsorption removes toxins from the blood that was not filtered.
- D) Tubular reabsorption moves blood plasma through the filtration membrane of the glomerular capillaries.

Answer: <https://biology-forums.com/index.php?topic=501906>

Question 2483

Describe how and why the left and right primary bronchi are structurally different from one another.

Answer: <https://biology-forums.com/index.php?topic=501611>

Question 2484

With which gland does the hypothalamus have a close anatomical and physiological relationship?

- A) pineal gland
- B) adrenal gland
- C) thyroid gland
- D) pituitary gland

Answer: <https://biology-forums.com/index.php?topic=500956>

Question 2485

Articular cartilage found at the ends of long bones serves to:

- A) attach tendons.
- B) produce synovial fluid.
- C) reduce friction and absorb shock.
- D) form the synovial membrane.

Answer: <https://biology-forums.com/index.php?topic=498984>

Question 2486

If you eat more Calories than you burn, you will lose weight.

Answer: <https://biology-forums.com/index.php?topic=501853>

Question 2487

Mr. Hartsell, a 70-year-old man, had his thymus gland removed as a treatment for an autoimmune disease he has. Predict the effect of his thymectomy on T cell production.

Answer: <https://biology-forums.com/index.php?topic=501508>

Question 2488

Explain how a chemical odorant is trans into a neural signal.

Answer: <https://biology-forums.com/index.php?topic=500916>

Question 2489

Lymph traveling from the right arm will be filtered by:

- A) mesenteric lymph nodes.
- B) axillary lymph nodes.
- C) cervical lymph nodes.
- D) inguinal lymph nodes.

Answer: <https://biology-forums.com/index.php?topic=501407>

Question 2490

Which of the following statements is the most accurate description of the sliding filament mechanism?

- A) Z discs slide over the thick and thin filaments
- B) both thick and thin filaments shorten
- C) thick filaments shorten while thin filaments remain unchanged
- D) thin filaments slide past thick filaments towards the M line.

Answer: <https://biology-forums.com/index.php?topic=500300>

Question 2491

Bone deposition exceeds bone resorption when bones are stressed through compression or tension.

Answer: <https://biology-forums.com/index.php?topic=498814>

Question 2492

During what phase does blood flow from the ventricles into the pulmonary trunk and aorta?

- A) isovolumetric contraction phase
- B) ventricular ejection phase
- C) isovolumetric relaxation phase
- D) ventricular filling

Answer: <https://biology-forums.com/index.php?topic=501137>

Question 2493

How many electrons are in the outermost shell of an atom with 15 electrons?

- A) 2
- B) 8
- C) 10
- D) 5

Answer: <https://biology-forums.com/index.php?topic=498274>

Question 2494

Forty year old Amy had a tubal ligation to permanently prevent pregnancies. She is concerned the tubal ligation will affect her libido (sex drive). Explain what effect, if any, the tubal ligation will have on her libido.

Answer: <https://biology-forums.com/index.php?topic=511295>

Question 2495

Saltatory conduction is slow due to the presence of insulating myelin around an axon.

Answer: <https://biology-forums.com/index.php?topic=500469>

Question 2496

Predict the scenario that will decrease peripheral resistance.

- A) increase in vessel obstructions
- B) increase in vessel radius
- C) increase in vessel length
- D) increase in blood viscosity

Answer: <https://biology-forums.com/index.php?topic=501204>

Question 2497

Explain how the hypothalamus controls the release of hormones from the anterior pituitary gland.

Answer: <https://biology-forums.com/index.php?topic=501045>

Question 2498

What type of receptor is located in the membranes of all parasympathetic target cells?

- A) beta receptor
- B) alpha receptor
- C) nicotinic receptor
- D) muscarinic receptor

Answer: <https://biology-forums.com/index.php?topic=500780>

Question 2499

Repair of epithelial tissues always involves the formation of scar tissue.

Answer: <https://biology-forums.com/index.php?topic=498640>

Question 2500

Damage to the facial nerve would result in a loss of taste sensation from:

- A) roof of the mouth.
- B) posterior one-third of the tongue.
- C) anterior two-thirds of the tongue.
- D) base of the tongue.

Answer: <https://biology-forums.com/index.php?topic=500843>

Question 2501

Which of the following is NOT a type of depression in a bone?

- A) facet
- B) foramen
- C) fossa
- D) fovea

Answer: <https://biology-forums.com/index.php?topic=498855>

Question 2502

What reaction is driven by glucose catabolism?

- A) ATP oxidation-reduction
- B) ATP catabolism
- C) ATP synthesis
- D) ATP hydrolysis

Answer: <https://biology-forums.com/index.php?topic=501771>

Question 2503

Cerebrospinal fluid (CSF) circulates through the:

- A) pia mater.
- B) subarachnoid space.
- C) blood-brain barrier.
- D) dura mater.

Answer: <https://biology-forums.com/index.php?topic=500534>

Question 2504

Which cranial nerve is NOT involved in eye movement?

- A) oculomotor nerve (III)
- B) abducens nerve (VI)
- C) vestibulocochlear nerve (VIII)
- D) trochlear nerve (IV)

Answer: <https://biology-forums.com/index.php?topic=500634>

Question 2505

Hydrogen bonds are strong attractions between nonpolar covalent molecules.

Answer: <https://biology-forums.com/index.php?topic=498371>

Question 2506

The function of yellow bone marrow is:

- A) triglyceride storage.
- B) hematopoiesis.
- C) acid-base homeostasis.
- D) mineral storage.

Answer: <https://biology-forums.com/index.php?topic=498754>

Question 2507

Explain how the sense of smell is carried into the brain from olfactory neurons.

Answer: <https://biology-forums.com/index.php?topic=500917>

Question 2508

Tennis elbow is a misnomer for a condition caused by changes in the tendon that attaches the extensor carpi radialis brevis to bone. Discuss the origin and action of this muscle.

Answer: <https://biology-forums.com/index.php?topic=500277>

Question 2509

Which muscle assists with the erection of the penis and clitoris?

- A) levator ani
- B) bulbospongiosus
- C) pubococcygeus
- D) superficial transverse perineal

Answer: <https://biology-forums.com/index.php?topic=500222>

Question 2510

Explain the significance of the plateau period during the action potential of a contractile cell.

Answer: <https://biology-forums.com/index.php?topic=501175>

Question 2511

Explain how synergists and antagonists balance the action of the agonist.

Answer: <https://biology-forums.com/index.php?topic=500280>

Question 2512

A single motor neuron together with all the skeletal muscle fibers it innervates is called a:

- A) motor end plate.
- B) motor unit.
- C) synaptic cleft.
- D) neuromuscular junction.

Answer: <https://biology-forums.com/index.php?topic=500332>

Question 2513

Assess the following statement for accuracy. Dark brown skin contains more melanocytes than pale skin.

Answer: <https://biology-forums.com/index.php?topic=498726>

Question 2514

Where are sensations integrated with memories of past experiences?

- A) cerebellum
- B) limbic system
- C) frontal lobe
- D) parietal lobe

Answer: <https://biology-forums.com/index.php?topic=500900>

Question 2515

Under what conditions would the skin produce sweat and experience cutaneous vasodilation?

- A) upon increase in body temperature
- B) upon exposure to UV radiation
- C) upon decrease in body temperature
- D) due to lack of oxygen

Answer: <https://biology-forums.com/index.php?topic=498657>

Question 2516

The most potent glucocorticoid produced by the adrenal cortex is aldosterone.

Answer: <https://biology-forums.com/index.php?topic=501036>

Question 2517

Which of the following is TRUE of veins?

- A) Veins have thinner walls than arteries.

- B) Veins have smaller lumens than arteries.
- C) Veins have more elastic fibers than arteries.
- D) Veins have more smooth muscle than arteries.

Answer: <https://biology-forums.com/index.php?topic=501198>

Question 2518

Describe the type of neural circuit that controls skeletal muscle movement.

Answer: <https://biology-forums.com/index.php?topic=500498>

Question 2519

What effect does an increase in antidiuretic hormone (ADH) have on the volume of extracellular fluid (ECF)?

- A) ECF increases when antidiuretic hormone (ADH) is present.
- B) ECF decreases when antidiuretic hormone (ADH) is present.
- C) Antidiuretic hormone (ADH) has no effect on ECF.
- D) ECF increases initially, then decreases when antidiuretic hormone (ADH) is present.

Answer: <https://biology-forums.com/index.php?topic=502014>

Question 2520

Where are the majority of calcium ions stored in the body?

- A) osseous tissue
- B) loose connective tissue
- C) intracellular fluid
- D) extracellular fluid

Answer: <https://biology-forums.com/index.php?topic=502031>

Question 2521

Sperm entry into the secondary oocyte triggers the acrosomal reaction.

Answer: <https://biology-forums.com/index.php?topic=511378>

Question 2522

What is the first process to occur in the digestive system?

- A) ingestion
- B) defecation
- C) absorption
- D) peristalsis

Answer: <https://biology-forums.com/index.php?topic=501643>

Question 2523

Which of the following is/are classified as fibrous joints?

- A) diarthroses
- B) synovial joints
- C) synchondroses and symphyses
- D) sutures, syndesmoses, and gomphoses

Answer: <https://biology-forums.com/index.php?topic=498969>

Question 2524

Which division detects stimuli of the general senses and special senses?

- A) visceral motor division (autonomic nervous system)
- B) somatic sensory division
- C) visceral sensory division
- D) somatic motor division

Answer: <https://biology-forums.com/index.php?topic=500621>

Question 2525

Five year old Charlie is so mad that he's holding his breath until he gets his way. What will stimulate his breathing rate to return to normal?

- A) accumulation of carbon dioxide
- B) lack of oxygen
- C) lack of sensory information being sent to central chemoreceptors
- D) lack of sensory information being sent to peripheral chemoreceptors

Answer: <https://biology-forums.com/index.php?topic=501597>

Question 2526

Clostridium botulinum is a bacterium that produces botulinum toxin that inhibits the release of acetylcholine. Which description best fits how muscle cells will respond to a lack of acetylcholine?

- A) Muscle cells will experienced fused or complete tetanus when there is a lack of acetylcholine.
- B) Muscle cells will produce greater tension when there is a lack of acetylcholine.
- C) Muscle cells will produce sustained contractions without relaxation when there is a lack of acetylcholine.
- D) Muscle cells will become paralyzed when there is a lack of acetylcholine.

Answer: <https://biology-forums.com/index.php?topic=500327>

Question 2527

List the six basic processes carried out by the digestive system.

Answer: <https://biology-forums.com/index.php?topic=501734>

Question 2528

Fenestrated glomerular capillaries are typically impermeable to:

- A) amino acids.
- B) glucose.
- C) albumin.
- D) nitrogenous wastes.

Answer: <https://biology-forums.com/index.php?topic=501907>

Question 2529

What is renal clearance used to estimate?

- A) net filtration pressure (NFP)
- B) glomerular hydrostatic pressure (GHP)
- C) glomerular filtration rate (GFR)
- D) countercurrent exchange

Answer: <https://biology-forums.com/index.php?topic=501945>

Question 2530

Tissues are structurally more complex than:

- A) cells.
- B) organs.
- C) organ systems.
- D) organisms.

Answer: <https://biology-forums.com/index.php?topic=498549>

Question 2531

High pressured blood in the ventricles:

- A) forces the AV valves open.
- B) forces the semilunar valves open.
- C) forces both the AV valves and semilunar valves shut.
- D) forces both the AV valves and semilunar valves open.

Answer: <https://biology-forums.com/index.php?topic=501131>

Question 2532

Damage to the cribriform plate would most likely affect the sense of:

- A) vision.
- B) hearing.
- C) balance.
- D) smell.

Answer: <https://biology-forums.com/index.php?topic=498866>

Question 2533

What stimulates the release of antidiuretic hormone (ADH, or vasopressin)?

- A) increasing blood pressure
- B) increasing solute concentration of the blood

- C) increasing solute concentration of the urine
- D) increasing blood glucose levels in the blood

Answer: <https://biology-forums.com/index.php?topic=500964>

Question 2534

Terry takes a drug classified as a proton-pump inhibitor to help his ulcer heal. Proton-pump inhibitors block the secretion of gastric acids. Predict and explain the effects of this drug on digestion in the stomach.

Answer: <https://biology-forums.com/index.php?topic=501753>

Question 2535

Through what hole in the occipital bone does the spinal cord travel?

- A) foramen lacerum
- B) carotid canal
- C) jugular foramen
- D) foramen magnum

Answer: <https://biology-forums.com/index.php?topic=498865>

Question 2536

The spleen filters and removes worn-out blood cells from circulation. Determine the type of capillary that would allow the transfer of blood cells between the blood and interstitial fluid.

Answer: <https://biology-forums.com/index.php?topic=501286>

Question 2537

What accounts for the majority of bone (osseous) tissue matrix?

- A) osteoid
- B) calcium salts
- C) collagen fibers
- D) bone marrow

Answer: <https://biology-forums.com/index.php?topic=498756>

Question 2538

What type of neuron detects changes in the number of solute particles in plasma?

- A) chemoreceptor
- B) baroreceptor
- C) nociceptor
- D) osmoreceptor

Answer: <https://biology-forums.com/index.php?topic=502012>

Question 2539

Which of the following would NOT terminate the effects of the neurotransmitter?

- A) presence of calcium ions in the presynaptic neuron
- B) reuptake of neurotransmitter into the presynaptic neuron
- C) degradation of the neurotransmitter by enzymes
- D) diffusion of the neurotransmitter into the extracellular fluid

Answer: <https://biology-forums.com/index.php?topic=500449>

Question 2540

Which of the following does NOT occur during the absorptive state?

- A) gluconeogenesis and glycogenolysis
- B) lipogenesis
- C) oxidation of nutrient molecules
- D) glycogenesis

Answer: <https://biology-forums.com/index.php?topic=501810>

Question 2541

Identify the rectus abdominis muscle.

- A) A
- B) B

- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=500213>

Question 2542

During which process is exposure to teratogens most devastating for the development of the embryo's organs?

- A) formation of the blastula
- B) cleavage
- C) gastrulation
- D) organogenesis

Answer: <https://biology-forums.com/index.php?topic=511330>

Question 2543

Define the terms diastole and systole.

Answer: <https://biology-forums.com/index.php?topic=501180>

Question 2544

Which pressure remains the same along the length of the capillary?

- A) interstitial fluid osmotic pressure
- B) capillary hydrostatic pressure
- C) interstitial fluid hydrostatic pressure
- D) colloid osmotic pressure

Answer: <https://biology-forums.com/index.php?topic=501236>

Question 2545

What is a determinant for organ compatibility and rejection of transplants?

- A) interleukins
- B) major histocompatibility complex (MHC) molecules
- C) pyrogens
- D) perforins

Answer: <https://biology-forums.com/index.php?topic=501442>

Question 2546

Creatine phosphate provides 30-40 seconds of energy for muscle activity.

Answer: <https://biology-forums.com/index.php?topic=500375>

Question 2547

Which of the following stimuli is detected by a chemoreceptor?

- A) stretch in the walls of arteries
- B) vasodilation of arterioles
- C) increased blood pressure
- D) decreased blood oxygen concentration

Answer: <https://biology-forums.com/index.php?topic=501223>

Question 2548

Determine the effects of a calcium deficiency on blood clotting.

Answer: <https://biology-forums.com/index.php?topic=501384>

Question 2549

A drug inhibits the citric acid cycle from generating ATP. How many ATP are lost from the total amount of ATP made thus far between the processes of glycolysis and the citric acid cycle?

- A) 1 ATP
- B) 2 ATP
- C) 4 ATP
- D) 12 ATP

Answer: <https://biology-forums.com/index.php?topic=501789>

Question 2550

Compare and contrast filtrate and blood.

Answer: <https://biology-forums.com/index.php?topic=501983>

Question 2551

Excess dietary proteins may become all of the following EXCEPT:

- A) glycerol.
- B) glucose.
- C) glycogen.
- D) fatty acids.

Answer: <https://biology-forums.com/index.php?topic=501809>

Question 2552

Membranous areas, or "soft spots," seen in the skull of an infant are called:

- A) fontanels.
- B) sutures.
- C) cavities.
- D) sinuses.

Answer: <https://biology-forums.com/index.php?topic=498876>

Question 2553

What outer ring of fibrocartilage protects the inner substance of an intervertebral disc and joins the vertebrae together?

- A) lateral mass
- B) transverse costal facet
- C) anulus fibrosis
- D) nucleus pulposus

Answer: <https://biology-forums.com/index.php?topic=498888>

Question 2554

Veins regulate blood pressure and control blood flow to organs.

Answer: <https://biology-forums.com/index.php?topic=501264>

Question 2555

What is the main function of the bones of the appendicular skeleton?

- A) protect underlying organs
- B) aid in motion
- C) encase body cavities
- D) form the longitudinal axis of the body

Answer: <https://biology-forums.com/index.php?topic=498852>

Question 2556

Due to an accident, Lori's sacral nerves are severed. What do you expect to be affected by this injury?

- A) production of saliva
- B) urinary bladder and the last portion of the large intestine
- C) heart and lungs
- D) blood pressure and heart rate

Answer: <https://biology-forums.com/index.php?topic=500777>

Question 2557

The sympathetic nervous system and parasympathetic nervous system are divisions of the:

- A) somatic sensory division.
- B) somatic motor division.
- C) visceral sensory division.
- D) visceral motor division (autonomic nervous system).

Answer: <https://biology-forums.com/index.php?topic=500623>

Question 2558

Which of the following food sources is a poor source of minerals?

- A) high-fat foods
- B) fruits
- C) meats

D) vegetables

Answer: <https://biology-forums.com/index.php?topic=501834>

Question 2559

Kelly takes an antihistamine for allergies. Explain why sleepiness is a side effect of this medicine.

Answer: <https://biology-forums.com/index.php?topic=500490>

Question 2560

Which of the following epithelia can be keratinized?

- A) stratified columnar epithelium
- B) transitional epithelium
- C) stratified squamous epithelium
- D) simple columnar epithelium

Answer: <https://biology-forums.com/index.php?topic=498564>

Question 2561

When arterial blood pressure is measured in the arm with a sphygmomanometer, which vessel is used?

- A) ulnar artery
- B) subclavian artery
- C) brachial artery
- D) axillary artery

Answer: <https://biology-forums.com/index.php?topic=501214>

Question 2562

Provide two characteristics that distinguish skeletal muscle tissue from smooth muscle tissue.

Answer: <https://biology-forums.com/index.php?topic=500342>

Question 2563

Explain how polygenic inheritance differs from multiple alleles.

Answer: <https://biology-forums.com/index.php?topic=511412>

Question 2564

Explain why the QRS wave on an electrocardiogram (ECG) is normally larger than a P wave.

Answer: <https://biology-forums.com/index.php?topic=501179>

Question 2565

Dilute urine is more likely to be produced when:

- A) the collecting duct is impermeable to water.
- B) antidiuretic hormone (ADH) is present in the distal tubule.
- C) the distal tubule is permeable to water.
- D) sodium and chloride ions are reabsorbed from the descending limb of the nephron loop (loop of Henle).

Answer: <https://biology-forums.com/index.php?topic=501939>

Question 2566

Identify the role of the urinary system in acid-base balance.

1. The kidneys can secrete bicarbonate ions when the pH of the blood rises.
 2. The kidneys contribute to acid-base balance by excreting fixed acids that the lungs cannot excrete.
 3. The kidneys can manufacture new bicarbonate ions when the pH of the blood falls.
 4. The kidneys contribute to acid-base balance by controlling the concentration of bicarbonate ions in the blood.
- A) 1, 2, 3, but not 4
 - B) 2, 3, 4, but not 1
 - C) 1, 3, 4, but not 2
 - D) 1, 2, 3, 4

Answer: <https://biology-forums.com/index.php?topic=511129>

Question 2567

The effects of norepinephrine and epinephrine have nearly the same effects as the neurotransmitters of the:

- A) afferent nervous system.
- B) parasympathetic nervous system.

- C) somatic nervous system.
- D) sympathetic nervous system.

Answer: <https://biology-forums.com/index.php?topic=501005>

Question 2568

Triceps brachii and biceps brachii perform opposing actions and are classified as:

- A) synergists.
- B) agonists.
- C) prime movers.
- D) antagonists.

Answer: <https://biology-forums.com/index.php?topic=500188>

Question 2569

Striking the "funny" bone is actually stimulation (or injury) to the:

- A) axillary nerve.
- B) radial nerve.
- C) ulnar nerve.
- D) median nerve.

Answer: <https://biology-forums.com/index.php?topic=500650>

Question 2570

Goblet cells, the most common unicellular gland in the body, secrete mucus into the digestive and respiratory tracts.

Answer: <https://biology-forums.com/index.php?topic=498633>

Question 2571

What lever class has the fulcrum situated between the force and the load?

- A) first-class lever
- B) second-class lever
- C) third-class lever
- D) fourth-class lever

Answer: <https://biology-forums.com/index.php?topic=500192>

Question 2572

Latrotoxin, produced by the poisonous black widow spider, increases the release of acetylcholine. How do muscle cells respond?

- A) Muscle cells will become paralyzed when excess acetylcholine exists.
- B) Muscle cells will twitch irregularly when excess acetylcholine exists.
- C) Muscle cells will experience a longer latent period when excess acetylcholine exists.
- D) Muscle cells will experience fused or complete tetanus when excess acetylcholine exists.

Answer: <https://biology-forums.com/index.php?topic=500326>

Question 2573

Todd was startled when the door slammed shut. What part of the brainstem is responsible?

- A) pons
- B) midbrain
- C) thalamus
- D) medulla

Answer: <https://biology-forums.com/index.php?topic=500525>

Question 2574

Where are the cell bodies of lower motor neurons located?

- A) dorsal horn of spinal gray matter
- B) brainstem
- C) anterior horn of spinal gray matter
- D) motor area of cerebral cortex

Answer: <https://biology-forums.com/index.php?topic=500558>

Question 2575

Predict the impact on blood pressure for a patient who hypersecretes adrenocorticotropic hormone (ACTH).

Answer: <https://biology-forums.com/index.php?topic=501058>

Question 2576

April has an abundance of freckles, a physical expression of her genes known as the:

- A) homologous.
- B) genotype.
- C) alleles.
- D) phenotype.

Answer: <https://biology-forums.com/index.php?topic=511369>

Question 2577

Identify and name the cranial nerves responsible for eye movement. Indicate the function of each cranial nerve identified.

Answer: <https://biology-forums.com/index.php?topic=500706>

Question 2578

The majority of synapses in the nervous system are:

- A) electrical.
- B) voltage.
- C) chemical.
- D) mechanical.

Answer: <https://biology-forums.com/index.php?topic=500438>

Question 2579

Erythropoietin is produced by the kidneys to:

- A) regulate removal of metabolic wastes.
- B) regulate red blood cell production by the bone marrow.
- C) conserve or eliminate hydrogen and bicarbonate ions.
- D) regulate blood solute concentration.

Answer: <https://biology-forums.com/index.php?topic=501882>

Question 2580

Damage to which of the following muscles would interfere most with the ability to breathe?

- A) platysma
- B) intercostals
- C) pterygoid
- D) obliques

Answer: <https://biology-forums.com/index.php?topic=500217>

Question 2581

Excess cortisol could result in:

- A) increased parasympathetic nervous system activation.
- B) high blood glucose levels.
- C) low blood pressure.
- D) an alkaline blood pH.

Answer: <https://biology-forums.com/index.php?topic=500999>

Question 2582

Bones are constantly undergoing resorption for various reasons. Which of the following cells accomplishes this process?

- A) osteogenic cell
- B) osteoblast
- C) osteocyte
- D) osteoclast

Answer: <https://biology-forums.com/index.php?topic=498760>

Question 2583

When NADH is oxidized, it becomes NAD⁺.

Answer: <https://biology-forums.com/index.php?topic=501840>

Question 2584

Urinalysis revealed Ms. Stoltzfus had ketone bodies in her urine. Explain what the presence of these ketone bodies tells us about her metabolism.

Answer: <https://biology-forums.com/index.php?topic=501875>

Question 2585

Between the start of the latent period and the start of the contraction period, there is a time interval during which the muscle cannot respond to another stimulus. This brief period is known as the:

- A) refractory period.
- B) relaxation period.
- C) tension period.
- D) action potential.

Answer: <https://biology-forums.com/index.php?topic=500325>

Question 2586

What is the main female gonad?

- A) uterus
- B) ovary
- C) vagina
- D) cervix

Answer: <https://biology-forums.com/index.php?topic=511216>

Question 2587

Six extrinsic eye muscles, including four rectus muscles and two oblique muscles, control the movement of each eye.

Answer: <https://biology-forums.com/index.php?topic=500906>

Question 2588

The permanent replacement of normal tissue by scar tissue is called:

- A) inflammation.
- B) necrosis.
- C) apoptosis.
- D) fibrosis.

Answer: <https://biology-forums.com/index.php?topic=498608>

Question 2589

Visual stimuli that arrive in the thalamus are relayed to the:

- A) medulla.
- B) primary visual cortex in the frontal lobe.
- C) primary visual cortex in the occipital lobe.
- D) brainstem nuclei.

Answer: <https://biology-forums.com/index.php?topic=500556>

Question 2590

The coupling of blood flow with the amount of air reaching the alveoli is known as:

- A) ventilation-perfusion matching
- B) partial pressure
- C) Boyle's law
- D) Henry's law

Answer: <https://biology-forums.com/index.php?topic=501583>

Question 2591

List the five major nerves of the brachial plexuses.

Answer: <https://biology-forums.com/index.php?topic=500714>

Question 2592

Which hormone does NOT regulate fluid balance in the body?

- A) antidiuretic hormone (ADH)
- B) vitamin D3 (calcitriol)
- C) atrial natriuretic peptide (ANP)
- D) angiotensin-II

Answer: <https://biology-forums.com/index.php?topic=502013>

Question 2593

Describe four mechanisms that assist in the return of venous blood to the heart.

Answer: <https://biology-forums.com/index.php?topic=501282>

Question 2594

What is a necessary reactant for glycolytic, or anaerobic, catabolism to proceed?

- A) glucose
- B) oxygen
- C) creatine phosphate
- D) myoglobin

Answer: <https://biology-forums.com/index.php?topic=500320>

Question 2595

Summarize how all cartilaginous joints are similar.

Answer: <https://biology-forums.com/index.php?topic=499047>

Question 2596

What best describes the Frank-Starling law?

- A) The Frank-Starling law states that the greater the volume of blood discharged from the heart, the greater the pressure required to discharge the blood.
- B) The Frank-Starling law states that the slower the heart rate, the greater the cardiac output.
- C) The Frank-Starling law states that the greater the stroke volume, the greater the heart rate.
- D) The Frank-Starling law states that the more the ventricular muscle cells are stretched, the more forcefully they contract.

Answer: <https://biology-forums.com/index.php?topic=501150>

Question 2597

The hematocrit is the percentage of blood composed of:

- A) erythrocytes
- B) plasma
- C) leukocytes
- D) platelets

Answer: <https://biology-forums.com/index.php?topic=501306>

Question 2598

What are the two articulations present in the elbow joint?

- A) humeroulnar joint and the humeroradial joint
- B) radioulnar joint and the glenohumeral joint
- C) tibiofemoral joint and the patellofemoral joint
- D) glenohumeral joint and the coracohumeral joint

Answer: <https://biology-forums.com/index.php?topic=499019>

Question 2599

Simple columnar epithelium lines the air sacs of the lungs, forms the outer boundary of serous membranes, and lines blood vessels.

Answer: <https://biology-forums.com/index.php?topic=498631>

Question 2600

Summarize the effects of the cephalic phase, gastric phase, and intestinal phase on acid secretion by the stomach.

Answer: <https://biology-forums.com/index.php?topic=501742>

Question 2601

Which antibody is the only one capable of crossing the placenta from a pregnant woman to her developing fetus?

- A) IgM
- B) IgE
- C) IgG
- D) IgA

Answer: <https://biology-forums.com/index.php?topic=501452>

Question 2602

The partial pressure gradient of oxygen determines the direction of the movement of this respiratory gas.

Answer: <https://biology-forums.com/index.php?topic=501634>

Question 2603

What does the vagus nerve (CN X) innervate?

- A) blood vessels
- B) cardiac muscle cells
- C) adipocytes
- D) sweat glands

Answer: <https://biology-forums.com/index.php?topic=500779>

Question 2604

What type of cell junction bands together adjacent cells, making the epidermis stronger?

- A) occluding junction
- B) gap junction
- C) tight junction
- D) desmosome

Answer: <https://biology-forums.com/index.php?topic=498667>

Question 2605

Predict what happens to air movement when atmospheric pressure is 760 mm Hg, intrapulmonary pressure is 758 mm Hg, and intrapleural pressure is 754 mm Hg.

- A) no air movement
- B) inhalation
- C) exhalation
- D) atelectasis

Answer: <https://biology-forums.com/index.php?topic=501565>

Question 2606

When blood glucose levels increase, a hormone called insulin is released from endocrine cells in the pancreas. The role of insulin is to return blood glucose levels to normal. Which part of this negative feedback loop is the stimulus?

- A) blood glucose levels return to normal
- B) pancreas
- C) increasing blood glucose levels
- D) insulin

Answer: <https://biology-forums.com/index.php?topic=500954>

Question 2607

Determine the type of reaction that occurs between fructose and glucose to form water and sucrose.

Answer: <https://biology-forums.com/index.php?topic=498367>

Question 2608

Summarize the three phases of the female's ovarian cycle.

Answer: <https://biology-forums.com/index.php?topic=511279>

Question 2609

How do vellus hairs differ from terminal hairs?

Answer: <https://biology-forums.com/index.php?topic=498729>

Question 2610

What molecule is both the starting compound and end result of the citric acid cycle?

- A) succinate
- B) pyruvate
- C) oxaloacetate
- D) citric acid

Answer: <https://biology-forums.com/index.php?topic=501778>

Question 2611

Explain how a polarized neuron differs from a hyperpolarized neuron.

Answer: <https://biology-forums.com/index.php?topic=500496>

Question 2612

What type of immunity exists even in the absence of a stimulus?

- A) cell-mediated immunity
- B) specific immunity
- C) innate immunity
- D) adaptive immunity

Answer: <https://biology-forums.com/index.php?topic=501415>

Question 2613

Desmosomes present between adjacent cardiac muscle cells allow ions to rapidly pass from one cell to another, permitting communication among cardiac muscle cells.

Answer: <https://biology-forums.com/index.php?topic=501159>

Question 2614

The average pressure in the systemic arteries during an entire cardiac cycle is known as:

- A) pulmonary circuit.
- B) systolic pressure.
- C) mean arterial pressure (MAP).
- D) venous pressure.

Answer: <https://biology-forums.com/index.php?topic=501211>

Question 2615

Trace the pathway of blood through the kidneys, from renal artery to renal vein.

Answer: <https://biology-forums.com/index.php?topic=501953>

Question 2616

Peripheral resistance includes all of the following EXCEPT:

- A) blood viscosity.
- B) blood vessel length.
- C) vessel radius.
- D) blood type.

Answer: <https://biology-forums.com/index.php?topic=501203>

Question 2617

The rule of nines is used to estimate the percentage of body surface area affected by:

- A) melanin.
- B) burns.
- C) basal cell carcinoma.
- D) malignant melanoma.

Answer: <https://biology-forums.com/index.php?topic=498704>

Question 2618

Explain how small intestine motility differs during fasting and eating.

Answer: <https://biology-forums.com/index.php?topic=501754>

Question 2619

The two groups of bones in the skull are the cranial bones, which encase the brain, and the facial bones, which form the framework of the face.

Answer: <https://biology-forums.com/index.php?topic=498924>

Question 2620

Bundles of white matter in the cerebrum are known as:

- A) ganglia.
- B) nerves.

- C) tracts.
- D) nuclei.

Answer: <https://biology-forums.com/index.php?topic=500502>

Question 2621

Which of the following demonstrates static equilibrium?

- A) spinning on a merry-go-round at the park
- B) riding in an elevator
- C) sitting in a movie theater to watch a film
- D) riding in a car

Answer: <https://biology-forums.com/index.php?topic=500893>

Question 2622

Iliopsoas is formed by the union of two muscles known as:

- A) vastus medialis and vastus lateralis.
- B) pectineus and adductor magnus.
- C) sartorius and gracilis.
- D) iliacus and psoas major.

Answer: <https://biology-forums.com/index.php?topic=500238>

Question 2623

Trace the pathway of tears from the eye to the nose.

Answer: <https://biology-forums.com/index.php?topic=500923>

Question 2624

Jack has decided to take up jogging as a way to enhance his endurance training.

Answer: <https://biology-forums.com/index.php?topic=500380>

Question 2625

The ability of the lens to change its shape from flattened to round is known as:

- A) accommodation.
- B) inversion.
- C) refraction.
- D) convergence.

Answer: <https://biology-forums.com/index.php?topic=500859>

Question 2626

What part of the inner ear is involved in hearing?

- A) utricle
- B) cochlea
- C) vestibule
- D) saccule

Answer: <https://biology-forums.com/index.php?topic=500880>

Question 2627

Determine why long-acting interferon medications are often prescribed for viral infections, such as hepatitis C.

Answer: <https://biology-forums.com/index.php?topic=501511>

Question 2628

How does the effector restore homeostasis in a negative feedback loop?

- A) The effector opposes the initial stimulus and shuts off when conditions return to the normal range.
- B) The effector amplifies the response, but does not continue indefinitely.
- C) The effector increases and reinforces the initial stimulus.
- D) The effector causes a rapid change in a variable.

Answer: <https://biology-forums.com/index.php?topic=498209>

Question 2629

Chris wears a testosterone patch to increase his testosterone levels. Determine the effects on gonadotropin-releasing hormone (GnRH) and luteinizing hormone (LH).

Answer: <https://biology-forums.com/index.php?topic=511287>

Question 2630

Sympathetic chain ganglia extend from the superior cervical ganglion to the inferior sacral ganglion.

Answer: <https://biology-forums.com/index.php?topic=500796>

Question 2631

Within the epiphyseal plate, which zone houses actively dividing cartilage cells in their lacunae?

- A) zone of hypertrophy
- B) zone of reserve cartilage
- C) zone of proliferation
- D) zone of ossification

Answer: <https://biology-forums.com/index.php?topic=498781>

Question 2632

Summarize the components of an osteon of compact bone tissue.

Answer: <https://biology-forums.com/index.php?topic=498820>

Question 2633

What part of the brain modifies the activity of upper motor neurons to produce voluntary movements and inhibit involuntary ones?

- A) premotor cortex
- B) basal nuclei
- C) cerebellum
- D) primary motor cortex

Answer: <https://biology-forums.com/index.php?topic=500560>

Question 2634

The major energy reserve in the body is found stored as fat in:

- A) areolar connective tissue.
- B) adipose tissue.
- C) reticular tissue.
- D) fibrocartilage.

Answer: <https://biology-forums.com/index.php?topic=498581>

Question 2635

Trace the pathway of bile from the gallbladder to the duodenum.

Answer: <https://biology-forums.com/index.php?topic=501756>

Question 2636

The fluid mosaic model defines the plasma membrane as a structure composed of multiple components, including the phospholipid bilayer, proteins, carbohydrates, and other lipids that exist in a dynamic arrangement.

Answer: <https://biology-forums.com/index.php?topic=498489>

Question 2637

Mr. Bailey, a 58 year old man, wants to add muscle mass to his frame since he has noticed he is not as strong as he used to be. Discuss the type of physical training you have determined will help him add strength to his muscles. How will your choice help him achieve his goal? What muscle changes do you think he will experience as he begins your training?

Answer: <https://biology-forums.com/index.php?topic=500388>

Question 2638

Together, which ions form hydroxyapatite crystals of osseous tissue?

- A) sodium and potassium ions
- B) sodium and chlorine ions
- C) calcium and phosphate ions
- D) potassium and magnesium ions

Answer: <https://biology-forums.com/index.php?topic=502032>

Question 2639

From large to small, the types of folds associated with the small intestine are circular folds, villi, and microvilli.

Answer: <https://biology-forums.com/index.php?topic=501729>

Question 2640

Molecular machines that perform specific functions for the cell are:

- A) the cytoskeleton.
- B) organelles.
- C) cytosol.
- D) the plasma membrane.

Answer: <https://biology-forums.com/index.php?topic=498397>

Question 2641

Hyperventilation is the cause of an acid-base imbalance known as:

- A) respiratory acidosis.
- B) respiratory alkalosis.
- C) metabolic acidosis.
- D) metabolic alkalosis.

Answer: <https://biology-forums.com/index.php?topic=511139>

Question 2642

Discuss the role of ATP synthase in the electron transport chain.

Answer: <https://biology-forums.com/index.php?topic=501862>

Question 2643

The epidermis of the skin serves as a barrier to mechanical stresses and protects us from microorganisms. What tissue do you think forms the epidermis?

- A) simple columnar epithelium
- B) pseudostratified columnar epithelium
- C) stratified squamous epithelium
- D) simple squamous epithelium

Answer: <https://biology-forums.com/index.php?topic=498568>

Question 2644

Which hormone makes the medullary respiratory center more sensitive to carbon dioxide levels during pregnancy?

- A) progesterone
- B) human chorionic gonadotropin (hCG)
- C) relaxin
- D) estrogen

Answer: <https://biology-forums.com/index.php?topic=511349>

Question 2645

Derrick has a vitamin D deficiency. Hypothesize an explanation for why he may have this deficiency.

Answer: <https://biology-forums.com/index.php?topic=498830>

Question 2646

What is NOT a true statement about the cortical nephrons?

- A) Cortical nephrons are wrapped by the vasa recta.
- B) Cortical nephrons are the most numerous type of nephron in the kidneys.
- C) Cortical nephrons have a short nephron loop (loop of Henle).
- D) The renal corpuscle of a cortical nephron sits in the renal cortex.

Answer: <https://biology-forums.com/index.php?topic=501902>

Question 2647

A fatty acid that contains two or more double covalent bonds is:

- A) hydrogenated.
- B) polyunsaturated.
- C) monounsaturated.
- D) saturated.

Answer: <https://biology-forums.com/index.php?topic=498338>

Question 2648

By what week of prenatal development will organogenesis be complete?

- A) week 4
- B) week 8
- C) week 12
- D) week 16

Answer: <https://biology-forums.com/index.php?topic=511331>

Question 2649

Which of the following male accessory sex glands produces a yellowish secretion containing fructose, prostaglandins, coagulating proteins and enzymes?

- A) prostate gland
- B) ejaculatory duct
- C) bulbourethral gland
- D) seminal vesicle

Answer: <https://biology-forums.com/index.php?topic=511194>

Question 2650

List the four quadrants and nine regions of the abdominopelvic cavity.

Answer: <https://biology-forums.com/index.php?topic=498247>

Question 2651

What unique feature is present only on the thoracic vertebrae?

- A) superior and inferior costal facets
- B) vertebral foramina
- C) transverse foramina
- D) dens (odontoid process)

Answer: <https://biology-forums.com/index.php?topic=498887>

Question 2652

Water obeys the principle of mass balance—in other words, what is gained by the body must equal what is lost by the body.

Answer: <https://biology-forums.com/index.php?topic=511146>

Question 2653

The framework of the spleen is created by a network of reticular fibers made by reticular cells.

Answer: <https://biology-forums.com/index.php?topic=501490>

Question 2654

Neurons are responsible for sending and receiving signals referred to as action potentials while neuroglial cells serve a variety of supportive functions.

Answer: <https://biology-forums.com/index.php?topic=500463>

Question 2655

What characteristic differentiates cardiac muscle cells from skeletal muscle cells?

- A) excitability
- B) sarcoplasmic reticulum
- C) striations
- D) intercalated discs

Answer: <https://biology-forums.com/index.php?topic=501105>

Question 2656

The sinoatrial (SA) node fires more rapidly at higher body temperatures, increasing cardiac output.

Answer: <https://biology-forums.com/index.php?topic=501166>

Question 2657

Write the overall reaction of glucose catabolism.

Answer: <https://biology-forums.com/index.php?topic=501859>

Question 2658

The olfactory nerves (CN I) are formed by:

- A) supporting cells.
- B) olfactory bulbs.
- C) olfactory tracts.
- D) axons of the olfactory neurons.

Answer: <https://biology-forums.com/index.php?topic=500829>

Question 2659

A patient was injected with medication that caused a fairly rapid decrease in heart rate and blood pressure. Determine the type of medication that was administered.

Answer: <https://biology-forums.com/index.php?topic=500820>

Question 2660

What characteristic is NOT descriptive of cardiac muscle tissue?

- A) intercalated discs
- B) striations
- C) voluntary muscle contractions
- D) located in the heart

Answer: <https://biology-forums.com/index.php?topic=500288>

Question 2661

Atropine is a drug that can be used to dry up excess mucus secretions. What cells in mucous membranes are affected? Predict the effect of atropine on the functioning of mucous membranes.

Answer: <https://biology-forums.com/index.php?topic=498646>

Question 2662

Which part of the electrocardiogram (ECG) would most be affected by abnormally slow depolarization of the ventricles?

- A) P wave
- B) QRS wave
- C) T wave
- D) R-T interval

Answer: <https://biology-forums.com/index.php?topic=501126>

Question 2663

What is the most abundant extracellular cation?

- A) chlorine ion
- B) sodium ion
- C) potassium ion
- D) magnesium ion

Answer: <https://biology-forums.com/index.php?topic=502020>

Question 2664

A reflex with a single synapse between the sensory and motor neurons within the spinal cord is known as a:

- A) somatic reflex.
- B) visceral reflex.
- C) polysynaptic reflex.
- D) monosynaptic reflex.

Answer: <https://biology-forums.com/index.php?topic=500680>

Question 2665

Explain why injuries involving the shoulder joint are common.

Answer: <https://biology-forums.com/index.php?topic=500179>

Question 2666

Detection of stimuli is a responsibility of the _____ while perception of the stimuli is a responsibility of the _____.

- A) CNS; PNS
- B) second-order neuron; first-order neuron

- C) PNS; CNS
- D) upper motor neuron; lower motor neuron

Answer: <https://biology-forums.com/index.php?topic=500553>

Question 2667

The clumping of cells that are cross-linked by their attachments to antibodies is known as:

- A) neutralization.
- B) opsonization.
- C) agglutination.
- D) precipitation.

Answer: <https://biology-forums.com/index.php?topic=501470>

Question 2668

What region of the esophagus is composed of smooth muscle only?

- A) upper third of the esophagus
- B) middle third of the esophagus
- C) lower third of the esophagus
- D) entire length of the esophagus

Answer: <https://biology-forums.com/index.php?topic=501664>

Question 2669

Damaged hepatocytes will impair:

- A) bile production.
- B) carbohydrate digestion.
- C) the defecation reflex.
- D) protein digestion.

Answer: <https://biology-forums.com/index.php?topic=501705>

Question 2670

The process of ossification begins at a primary ossification center in both intramembranous and endochondral ossification.

Answer: <https://biology-forums.com/index.php?topic=498811>

Question 2671

Feeding occurs during the absorptive state.

Answer: <https://biology-forums.com/index.php?topic=501851>

Question 2672

The digestion of which food group may be affected by an inadequate amount of stomach acid?

- A) proteins
- B) starches
- C) steroids
- D) lipids

Answer: <https://biology-forums.com/index.php?topic=501677>

Question 2673

How are the products of free ribosomes different from bound ribosomes?

Answer: <https://biology-forums.com/index.php?topic=498477>

Question 2674

Explain how catabolism differs from anabolism.

Answer: <https://biology-forums.com/index.php?topic=501854>

Question 2675

Cells may lyse when placed into a hypertonic environment.

Answer: <https://biology-forums.com/index.php?topic=498491>

Question 2676

Both synovial fluid and articular cartilage function in shock absorption and the lubrication of a synovial joint.

Answer: <https://biology-forums.com/index.php?topic=499033>

Question 2677

Summarize the defecation reflex.

Answer: <https://biology-forums.com/index.php?topic=501755>

Question 2678

What term best summarizes ATP hydrolysis?

- A) oxidative
- B) endergonic
- C) exergonic
- D) anabolic

Answer: <https://biology-forums.com/index.php?topic=501766>

Question 2679

Explain what thrombolysis accomplishes.

Answer: <https://biology-forums.com/index.php?topic=501385>

Question 2680

How much blood is pumped from each ventricle during the ventricular ejection phase?

- A) 50 ml
- B) 70 ml
- C) 90 ml
- D) 120 ml

Answer: <https://biology-forums.com/index.php?topic=501136>

Question 2681

Decreased oxygen availability leads to muscle fatigue.

Answer: <https://biology-forums.com/index.php?topic=500381>

Question 2682

What follows immediately after fertilization occurs?

- A) sperm migration
- B) cleavage
- C) capacitation
- D) acrosomal reaction

Answer: <https://biology-forums.com/index.php?topic=511302>

Question 2683

Which of the following is an unpaired facial bone?

- A) zygomatic bone
- B) palatine bone
- C) mandible
- D) lacrimal bone

Answer: <https://biology-forums.com/index.php?topic=498859>

Question 2684

What general tissue type binds, supports, and protects the body?

- A) connective
- B) epithelial
- C) muscle
- D) nervous

Answer: <https://biology-forums.com/index.php?topic=498550>

Question 2685

Predict why vitamins A, D, E, and K should be taken with some food to enable their absorption.

Answer: <https://biology-forums.com/index.php?topic=501872>

Question 2686

In anatomical position, the palms are on the:

- A) anterior (ventral) surface.
- B) posterior (dorsal) surface.
- C) lateral surface.
- D) superior (cranial) surface.

Answer: <https://biology-forums.com/index.php?topic=498185>

Question 2687

Subcutaneous injections are placed into the hypodermis beneath the skin.

Answer: <https://biology-forums.com/index.php?topic=498708>

Question 2688

Discuss the functions of the two main divisions of the peripheral nervous system (PNS).

Answer: <https://biology-forums.com/index.php?topic=500702>

Question 2689

Which of the following is NOT a type of connective tissue proper?

- A) areolar connective tissue
- B) dense regular connective tissue
- C) hyaline cartilage
- D) adipose tissue

Answer: <https://biology-forums.com/index.php?topic=498576>

Question 2690

The phrenic nerve is a member of the:

- A) cervical plexus.
- B) brachial plexus.
- C) sacral plexus.
- D) lumbar plexus.

Answer: <https://biology-forums.com/index.php?topic=500648>

Question 2691

Muscles with a triangular shape, such as the pectoralis major muscle in the chest, typically have a:

- A) spiral fascicle arrangement.
- B) parallel fascicle arrangement.
- C) convergent fascicle arrangement.
- D) unipennate fascicle arrangement.

Answer: <https://biology-forums.com/index.php?topic=500181>

Question 2692

A nurse administers pilocarpine eye drops. The nurse instructs the patient to press on the nasolacrimal duct for 30 seconds because the medication can have some systemic side effects, such as affecting the heart rate. Explain the rationale for pressing on the nasolacrimal duct.

Answer: <https://biology-forums.com/index.php?topic=500922>

Question 2693

Classify sodium balance in the human body.

- A) electrolyte balance
- B) fluid balance
- C) acid-base balance
- D) pH balance

Answer: <https://biology-forums.com/index.php?topic=501994>

Question 2694

Describe the role of osteoblasts in intramembranous ossification.

Answer: <https://biology-forums.com/index.php?topic=498822>

Question 2695

The total amount of energy expended by the body to power all of its processes is called:

- A) homeostasis.
- B) cellular respiration.
- C) the metabolic rate.
- D) the basal metabolic rate.

Answer: <https://biology-forums.com/index.php?topic=501817>

Question 2696

Place the following steps of protein synthesis in the correct order as they occur.

1. mRNA is produced in the nucleus.
2. Ribosome moves along mRNA.
3. DNA uncoils for transcription.
4. Polypeptide is produced.
5. tRNA brings amino acids to the ribosome.
6. mRNA moves to the ribosome.

- A) 3, 5, 1, 6, 2, 4
- B) 3, 1, 6, 2, 5, 4
- C) 2, 1, 5, 4, 3, 6
- D) 2, 4, 6, 1, 3, 5

Answer: <https://biology-forums.com/index.php?topic=498444>

Question 2697

The Na⁺/K⁺ ATPase (Na⁺/K⁺ pump) maintains the concentration gradients for sodium and potassium ions by moving two sodium ions out of the cell and three potassium ions into the cell.

Answer: <https://biology-forums.com/index.php?topic=500370>

Question 2698

The follicle cells of the thyroid gland produce thyroid hormones while the parafollicular cells produce parathyroid hormone (PTH).

Answer: <https://biology-forums.com/index.php?topic=501033>

Question 2699

Explain why eight-year-old Carolina feels like she is still riding the merry-go-round, although she disembarked a few moments ago.

Answer: <https://biology-forums.com/index.php?topic=500938>

Question 2700

Predict how a medication that inhibits the active enzyme factor Xa from being activated would impact the coagulation cascade.

Answer: <https://biology-forums.com/index.php?topic=501391>

Question 2701

Glomerular colloid osmotic pressure (GCOP) is created by:

- A) systemic blood pressure.
- B) proteins such as albumin in the blood.
- C) fluids in the blood plasma.
- D) filtrate in the capsular space.

Answer: <https://biology-forums.com/index.php?topic=501911>

Question 2702

What do skeletal muscle contractions share in common with smooth muscle contractions?

- A) Both types of contractions consume very little ATP.
- B) Both types of contractions generate little force or a weak force.
- C) Both types of contractions do not require calcium ions for a contraction to occur.
- D) Both types of contractions result from thick and thin filaments sliding past one another.

Answer: <https://biology-forums.com/index.php?topic=500341>

Question 2703

The four most common elements, comprising 96% of the body's mass, are:

- A) carbon, sodium, phosphorus, sulfur.

- B) oxygen, nitrogen, hydrogen, carbon.
- C) chlorine, sodium, magnesium, potassium.
- D) oxygen, potassium, iron, copper.

Answer: <https://biology-forums.com/index.php?topic=498278>

Question 2704

Describe the pathway of voluntary motor control from its point of initiation in the cerebral cortex to the initiation of movement by upper motor neurons.

Answer: <https://biology-forums.com/index.php?topic=500609>

Question 2705

List four hormones that affect fluid balance in the body.

Answer: <https://biology-forums.com/index.php?topic=511164>

Question 2706

What creates the taeniae coli?

- A) serosa
- B) longitudinal layer of the muscularis externa
- C) oblique layer of the muscularis externa
- D) circular layer of the muscularis externa

Answer: <https://biology-forums.com/index.php?topic=501691>

Question 2707

The partial pressure of oxygen in a pulmonary capillary is about 40 mm Hg. Determine the partial pressure that will promote movement of oxygen into the pulmonary capillary from air in the alveolus.

- A) 18 mm Hg
- B) 35 mm Hg
- C) 40 mm Hg
- D) 104 mm Hg

Answer: <https://biology-forums.com/index.php?topic=501580>

Question 2708

Which of the following does NOT increase surface area in the small intestine?

- A) rugae
- B) microvilli
- C) circular folds
- D) villi

Answer: <https://biology-forums.com/index.php?topic=501684>

Question 2709

During which month of prenatal development will the fetus begin to develop reflexes?

- A) month 2
- B) month 4
- C) month 6
- D) month 8

Answer: <https://biology-forums.com/index.php?topic=511338>

Question 2710

What cranial nerve carries information about hearing and head movement to the brain?

- A) abducens nerve (CN VI)
- B) trigeminal nerve (CN IV)
- C) trochlear nerve (CN V)
- D) vestibulocochlear nerve (CN VIII)

Answer: <https://biology-forums.com/index.php?topic=500881>

Question 2711

Which cranial nerve stimulates acid secretion during the stomach's gastric phase?

- A) accessory nerve
- B) vagus nerve
- C) hypoglossal nerve

D) glossopharyngeal nerve

Answer: <https://biology-forums.com/index.php?topic=501675>

Question 2712

Which of the following is an effect of angiotensin-II (A-II)?

- A) A-II decreases systemic blood pressure.
- B) A-II promotes thirst.
- C) A-II decreases blood volume.
- D) A-II dilates efferent arterioles.

Answer: <https://biology-forums.com/index.php?topic=501924>

Question 2713

A female patient complains of a greenish-white discharge from her vagina that has a strong odor. She also experiences itching and burning of her genitals. Determine the sexually transmitted infection (STI) she has.

- A) chlamydia
- B) gonorrhea
- C) trichomoniasis
- D) syphilis

Answer: <https://biology-forums.com/index.php?topic=511251>

Question 2714

The phalanges of the hand and the phalanges of the feet both consist of 15 bones.

Answer: <https://biology-forums.com/index.php?topic=498934>

Question 2715

Discuss the location and function of valves in the heart.

Answer: <https://biology-forums.com/index.php?topic=501172>

Question 2716

How many ATP molecules are made when one glucose molecule is completely oxidized?

- A) 2 ATP
- B) 4 ATP
- C) 24 ATP
- D) 38 ATP

Answer: <https://biology-forums.com/index.php?topic=501788>

Question 2717

What influences the appearance and function of skeletal muscle?

- A) arrangement of the pattern of fascicles
- B) number of muscle cells in a motor unit
- C) presence of perimysium around fascicles
- D) presence of endomysium around muscle cells

Answer: <https://biology-forums.com/index.php?topic=500180>

Question 2718

Beth was born with cleft palate in which her hard palate was not completely fused. She was born with an opening in her palate where the bones failed to join together. Determine the affected bones and predict the impact on the oral and nasal cavities.

Answer: <https://biology-forums.com/index.php?topic=498954>

Question 2719

Determine the pH value that represents a basic, or alkaline, solution.

- A) pH of 1
- B) pH of 4
- C) pH of 7
- D) pH of 10

Answer: <https://biology-forums.com/index.php?topic=501996>

Question 2720

Krista is having difficulty with the progression of labor. Her obstetrician administers a hormone to assist with her uterine contractions. This hormone is

a synthetic version of:

- A) estrogen.
- B) oxytocin.
- C) human chorionic gonadotropin (hCG).
- D) cortisol.

Answer: <https://biology-forums.com/index.php?topic=511354>

Question 2721

Tactile sensation does NOT refer to:

- A) light touch.
- B) crude touch.
- C) vibrations.
- D) two-point discrimination.

Answer: <https://biology-forums.com/index.php?topic=500552>

Question 2722

Explain how primary bone differs from secondary bone.

Answer: <https://biology-forums.com/index.php?topic=498821>

Question 2723

The first sphincter encountered in the alimentary canal is the:

- A) pyloric sphincter.
- B) ileocecal sphincter.
- C) gastroesophageal sphincter.
- D) upper esophageal sphincter.

Answer: <https://biology-forums.com/index.php?topic=501663>

Question 2724

After birth, the mother may lose excess fluids from the uterus as:

- A) lactation.
- B) colostrum.
- C) lochia.
- D) meconium.

Answer: <https://biology-forums.com/index.php?topic=511365>

Question 2725

Which of the following promotes the depolarization stage?

- A) hydrolysis of ATP
- B) opening of voltage-gated sodium ion channels and sodium ions enter the cell
- C) closure of voltage-gated sodium ion channels
- D) opening of voltage-gated potassium ion channels and potassium ions exit the cell

Answer: <https://biology-forums.com/index.php?topic=500306>

Question 2726

Which type of lipoprotein transfers cholesterol from the cells in peripheral tissues to the liver for inclusion as part of bile?

- A) lipoprotein lipase
- B) very-low density lipoproteins (VLDLs)
- C) high-density lipoproteins (HDLs)
- D) low-density lipoproteins (LDLs)

Answer: <https://biology-forums.com/index.php?topic=501836>

Question 2727

Is pseudostratified columnar epithelium a simple tissue or a stratified tissue? Explain.

Answer: <https://biology-forums.com/index.php?topic=498615>

Question 2728

Discuss the two types of embryonic folding. What is accomplished by each type of folding?

Answer: <https://biology-forums.com/index.php?topic=511401>

Question 2729

Explain where the cell bodies of the preganglionic neuron and the postganglionic neuron are located in the autonomic motor pathway.

Answer: <https://biology-forums.com/index.php?topic=500806>

Question 2730

What type of neuron is found within the CNS to perform the job of information processing?

- A) bipolar neurons
- B) motor (efferent) neurons
- C) interneurons (association neurons)
- D) sensory (afferent) neurons

Answer: <https://biology-forums.com/index.php?topic=500406>

Question 2731

Where within the spinal cord do the cell bodies of preganglionic sympathetic neurons originate?

- A) anterior horns of the thoracic and lumbar spinal cord
- B) lateral horns of the cervical and sacral spinal cord
- C) posterior horns of the thoracic and lumbar spinal cord
- D) lateral horns of the thoracic and lumbar spinal cord

Answer: <https://biology-forums.com/index.php?topic=500746>

Question 2732

Explain what structures contribute to the function of the nasal cavities.

Answer: <https://biology-forums.com/index.php?topic=501606>

Question 2733

The anterior cruciate ligament anchors the tibia bone to:

- A) a muscle.
- B) a ligament.
- C) another bone.
- D) a bursa.

Answer: <https://biology-forums.com/index.php?topic=498988>

Question 2734

Describe the SQ3R method for reading a textbook.

Answer: <https://biology-forums.com/index.php?topic=498239>

Question 2735

The inability to produce a gag reflex could indicate a problem with the:

- A) facial nerve (VII) or trigeminal nerve (V).
- B) glossopharyngeal nerve (IX) or vagus nerve (X).
- C) abducens nerve (VI) or trochlear nerve (IV).
- D) hypoglossal nerve (XII) or vestibulocochlear nerve (VIII).

Answer: <https://biology-forums.com/index.php?topic=500683>

Question 2736

A radiograph reveals epiphyseal lines in the long bones of a 12-year-old's hand. Which of the following statements is correct?

- A) The epiphyseal plates have ossified and further growth in length is not possible.
- B) Intramembranous ossification will enable continued growth in length.
- C) More growth will occur during the teenage years as sex hormones stimulate rebuilding of epiphyseal plates.
- D) Administration of growth hormone will stimulate further bone growth in length.

Answer: <https://biology-forums.com/index.php?topic=498784>

Question 2737

What happens to the lungs if intrapleural pressure equals or increases above atmospheric pressure?

- A) overinflation
- B) collapse
- C) burst
- D) inhalation

Answer: <https://biology-forums.com/index.php?topic=501564>

Question 2738

The plasma membrane of a muscle cell is known as the:

- A) myofibril.
- B) sarcoplasmic reticulum.
- C) sarcolemma.
- D) sarcomere.

Answer: <https://biology-forums.com/index.php?topic=500290>

Question 2739

What is the action of luteinizing hormone (LH)?

- A) LH stimulates the secretion of interstitial-cell stimulating hormone (ICSH).
- B) LH stimulates interstitial cells of the testes to produce testosterone.
- C) LH stimulates the secretion of inhibin.
- D) LH stimulates the sustentacular cells of the testes to secrete androgen-binding protein (ABP).

Answer: <https://biology-forums.com/index.php?topic=511206>

Question 2740

Which of the following connects vessels through vascular anastomoses?

- A) collaterals
- B) capillary beds
- C) precapillary sphincters
- D) postcapillary venules

Answer: <https://biology-forums.com/index.php?topic=501200>

Question 2741

Aiden was surprised to learn that his salad dressing contained glucose since it did NOT taste:

- A) salty.
- B) sweet.
- C) bitter.
- D) sour.

Answer: <https://biology-forums.com/index.php?topic=500840>

Question 2742

Mr. Jenkins spent the afternoon working and sweating in the yard on a hot summer day. Explain why he should avoid waiting until the end of completing his yard work to consume large amounts of water to quench his thirst.

Answer: <https://biology-forums.com/index.php?topic=511177>

Question 2743

Identify the cephalic region.

Answer: <https://biology-forums.com/index.php?topic=498230>

Question 2744

A parent cell has 28 chromosomes and completes meiosis. How many chromosomes result in each cell produced?

- A) 28 chromosomes
- B) 56 chromosomes
- C) 14 chromosomes
- D) 46 chromosomes

Answer: <https://biology-forums.com/index.php?topic=511183>

Question 2745

What type of motion at a synovial joint does NOT involve the movement of a joint around an axis?

- A) special
- B) gliding
- C) angular
- D) rotation

Answer: <https://biology-forums.com/index.php?topic=498992>

Question 2746

Melatonin is produced by the:

- A) pineal gland.
- B) kidneys.
- C) adrenal glands.
- D) heart.

Answer: <https://biology-forums.com/index.php?topic=501016>

Question 2747

What should NOT be found in filtrate?

- A) electrolytes
- B) glucose
- C) water
- D) albumin

Answer: <https://biology-forums.com/index.php?topic=501904>

Question 2748

The last tracheal ring of cartilage, known as the carina, has sensory receptors that can trigger a cough reflex.

Answer: <https://biology-forums.com/index.php?topic=501626>

Question 2749

Into which vein does blood in the external jugular vein drain?

- A) internal jugular vein
- B) vertebral vein
- C) inferior vena cava
- D) subclavian vein

Answer: <https://biology-forums.com/index.php?topic=501253>

Question 2750

Where do T cells become immunocompetent?

- A) bone marrow
- B) thyroid gland
- C) tonsils
- D) thymus

Answer: <https://biology-forums.com/index.php?topic=501434>

Question 2751

What term implies bone deposition via osteoblasts?

- A) keratinization
- B) degradation
- C) resorption
- D) calcification

Answer: <https://biology-forums.com/index.php?topic=498789>

Question 2752

By which period of prenatal development will the placenta be fully formed?

- A) pre-embryonic period
- B) fetal period
- C) embryonic period
- D) infancy

Answer: <https://biology-forums.com/index.php?topic=511332>

Question 2753

Which meninx touches the brain?

- A) dura mater
- B) subarachnoid space
- C) pia mater
- D) arachnoid mater

Answer: <https://biology-forums.com/index.php?topic=500535>

Question 2754

The most abundant component of plasma is:

- A) ions.
- B) proteins.
- C) water.
- D) gases.

Answer: <https://biology-forums.com/index.php?topic=501310>

Question 2755

The universal blood donor is O- since this blood type lacks the A, B, and Rh antigens.

Answer: <https://biology-forums.com/index.php?topic=501372>

Question 2756

If NADH and FADH₂ fail to be oxidized as part of the electron transport chain (ETC), what is affected?

- A) the phosphorylation and oxidation of glyceraldehyde-3-phosphate
- B) the electromotive force required to drive the electron transport chain (ETC)
- C) the regeneration of oxaloacetate
- D) the formation of acetyl-CoA

Answer: <https://biology-forums.com/index.php?topic=501781>

Question 2757

Which serous membrane covers the abdominal organs?

- A) pleura
- B) mediastinum
- C) peritoneum
- D) pericardium

Answer: <https://biology-forums.com/index.php?topic=498203>

Question 2758

Meiosis is a special type of cell division that produces:

- A) gametes.
- B) myocytes.
- C) hepatocytes.
- D) neurons.

Answer: <https://biology-forums.com/index.php?topic=511186>

Question 2759

Summarize the following terms: acid, base, and buffer.

Answer: <https://biology-forums.com/index.php?topic=511160>

Question 2760

Catherine is confused by the information on food labels. Instruct her about the differences among the following three she sees on the label: polyunsaturated fat, saturated fat, and monounsaturated fat.

Answer: <https://biology-forums.com/index.php?topic=498392>

Question 2761

Thrombin converts fibrinogen into fibrin, a mesh that glues together the platelet plug and helps seal the damaged vessel.

Answer: <https://biology-forums.com/index.php?topic=501369>

Question 2762

The eye contains two cavities situated within the anterior chamber.

Answer: <https://biology-forums.com/index.php?topic=500908>

Question 2763

The stomach differs anatomically from other organs of the alimentary canal because it has an additional oblique layer of muscularis externa for churning.

Answer: <https://biology-forums.com/index.php?topic=501725>

Question 2764

You are thirsty and stranded on an island with two sources of water to drink. You have the option to drink the salty ocean water or to drink muddy, fresh water. Which water will you choose to drink to quench your thirst? Explain your selection.

Answer: <https://biology-forums.com/index.php?topic=498543>

Question 2765

Gas exchange occurs in all of the following EXCEPT:

- A) alveolar sacs.
- B) respiratory bronchioles.
- C) terminal bronchioles.
- D) alveolar ducts.

Answer: <https://biology-forums.com/index.php?topic=501553>

Question 2766

The alpha-helix and beta-pleated sheet are examples of:

- A) primary protein structure.
- B) secondary protein structure.
- C) tertiary protein structure.
- D) quaternary protein structure.

Answer: <https://biology-forums.com/index.php?topic=498344>

Question 2767

Craniosynostosis is the premature fusion of one or more skull sutures in an infant. Predict what problem may arise if the skull sutures prematurely ossify during infancy.

Answer: <https://biology-forums.com/index.php?topic=498953>

Question 2768

How does the two-point discrimination threshold demonstrate the size of receptor fields in the skin?

Answer: <https://biology-forums.com/index.php?topic=500719>

Question 2769

The triangular depression in the medial surface of each lung, where blood vessels and the primary bronchi enter, is the:

- A) apex.
- B) base.
- C) hilum.
- D) lobule.

Answer: <https://biology-forums.com/index.php?topic=501558>

Question 2770

Which of the following is NOT part of the urinary system?

- A) spleen
- B) ureter
- C) urethra
- D) kidney

Answer: <https://biology-forums.com/index.php?topic=501878>

Question 2771

List the three variables that mainly determine peripheral resistance.

Answer: <https://biology-forums.com/index.php?topic=501278>

Question 2772

Explain codominance using the ABO blood groups as an example.

Answer: <https://biology-forums.com/index.php?topic=511411>

Question 2773

Neuronal pools are collections of:

- A) bipolar neurons.
- B) motor neurons.
- C) efferent neurons.
- D) interneurons.

Answer: <https://biology-forums.com/index.php?topic=500459>

Question 2774

Which muscle is an antagonist to the gastrocnemius muscle?

- A) tibialis anterior
- B) soleus
- C) extensor digitorum longus
- D) plantaris

Answer: <https://biology-forums.com/index.php?topic=500243>

Question 2775

What process involves the donation of a phosphate group from ATP to a reactant to "pay" for a cellular process?

- A) synthesis
- B) phosphorylation
- C) anabolism
- D) oxidation

Answer: <https://biology-forums.com/index.php?topic=501765>

Question 2776

Pressure in the aorta is greater than pressure in the pulmonary trunk; therefore, the left ventricle has to generate a greater pressure than the right ventricle in order to eject blood from the heart.

Answer: <https://biology-forums.com/index.php?topic=501163>

Question 2777

A sinus infection would most likely cause swollen:

- A) cervical lymph nodes.
- B) inguinal lymph nodes.
- C) mesenteric lymph nodes.
- D) axillary lymph nodes.

Answer: <https://biology-forums.com/index.php?topic=501408>

Question 2778

What type of membrane lines cavities that open to the outside of the body?

- A) serous membrane
- B) synovial membrane
- C) cutaneous membrane
- D) mucous membrane

Answer: <https://biology-forums.com/index.php?topic=498605>

Question 2779

Standing on tiptoes is an example of a:

- A) first-class lever system.
- B) second-class lever system.
- C) third-class lever system.
- D) lever system demonstrating mechanical disadvantage.

Answer: <https://biology-forums.com/index.php?topic=500196>

Question 2780

What controls the passage of chyme from the last region of the stomach to the duodenum region of the small intestine?

- A) ileocecal valve
- B) lower esophageal sphincter
- C) gastroesophageal sphincter
- D) pyloric sphincter

Answer: <https://biology-forums.com/index.php?topic=501667>

Question 2781

What is NOT allowed to pass through the placental barrier between maternal and fetal blood supplies?

- A) blood cells
- B) certain gases
- C) nutrients
- D) wastes

Answer: <https://biology-forums.com/index.php?topic=511337>

Question 2782

Which of the following vessels has the lowest blood pressure?

- A) elastic arteries
- B) aorta
- C) inferior vena cava
- D) capillary beds

Answer: <https://biology-forums.com/index.php?topic=501215>

Question 2783

What gland secretes oil to prevent the eyelids from sticking together?

- A) lacrimal gland
- B) sudoriferous gland
- C) tarsal gland
- D) cerumen gland

Answer: <https://biology-forums.com/index.php?topic=500845>

Question 2784

Which nervous system division is responsible for the integration of sensory information?

- A) visceral motor division
- B) peripheral nervous system
- C) somatic motor division
- D) central nervous system

Answer: <https://biology-forums.com/index.php?topic=500394>

Question 2785

The receptor cells of the semicircular canals are located in the:

- A) saccules.
- B) utricles.
- C) perilymph.
- D) ampullae.

Answer: <https://biology-forums.com/index.php?topic=500882>

Question 2786

List the tropic hormones released by the anterior pituitary gland.

Answer: <https://biology-forums.com/index.php?topic=501046>

Question 2787

Into which layer of the skin do you think tattoo ink is injected? Explain why.

Answer: <https://biology-forums.com/index.php?topic=498735>

Question 2788

Discuss the two types of photoreceptors and the function of each.

Answer: <https://biology-forums.com/index.php?topic=500927>

Question 2789

Jerry, a 42-year-old male, is experiencing excessive appositional growth. Determine his condition, the cause of his condition, and explain the impact on his bones.

Answer: <https://biology-forums.com/index.php?topic=498827>

Question 2790

What can you tell about a muscle whose name includes the word serratus?

- A) It is a large muscle.
- B) Its appearance is serrated or jagged.
- C) It is a supinator.
- D) It is located on the medial side of the body.

Answer: <https://biology-forums.com/index.php?topic=500186>

Question 2791

Explain the benefit of anastomoses in coronary artery circulation.

Answer: <https://biology-forums.com/index.php?topic=501171>

Question 2792

ATP is required for a power stroke to be repeated during the contraction cycle.

Answer: <https://biology-forums.com/index.php?topic=500373>

Question 2793

From its proximal end at the uterus as it approaches the ovary, the regions of the uterine tube are:

- A) isthmus, ampulla, fimbriae, infundibulum.
- B) isthmus, ampulla, infundibulum, fimbriae.
- C) isthmus, infundibulum, ampulla, fimbriae.
- D) ampulla, isthmus, infundibulum, fimbriae.

Answer: <https://biology-forums.com/index.php?topic=511218>

Question 2794

How is fructose absorbed across the apical enterocyte membrane?

- A) Na⁺/K⁺ pump
- B) Na⁺/glucose cotransporter
- C) facilitated diffusion
- D) endocytosis

Answer: <https://biology-forums.com/index.php?topic=501714>

Question 2795

Cells that stall in a state of the cell cycle known as G₀ are said to be:

- A) cancerous cells.
- B) nondividing cells.
- C) dead cells.
- D) rapidly dividing cells.

Answer: <https://biology-forums.com/index.php?topic=498457>

Question 2796

Digoxin is a drug that leads to increases in potassium ion concentration in the interstitial fluid. Determine the condition that results from digoxin toxicity.

- A) hyperglycemia
- B) hypercalcemia
- C) hypernatremia
- D) hyperkalemia

Answer: <https://biology-forums.com/index.php?topic=502028>

Question 2797

Clark received a vaccine to help protect him against the measles, but his childhood friend Nicole contracted the measles since she did not receive a vaccine. For each person, determine if active immunity or passive immunity is involved and explain why Clark benefitted from the vaccine.

Answer: <https://biology-forums.com/index.php?topic=501520>

Question 2798

Summarize the role of parathyroid hormone (PTH) and vitamin D₃ (calcitriol) in calcium ion and phosphate ion concentration regulation.

Answer: <https://biology-forums.com/index.php?topic=511172>

Question 2799

Reactions in which smaller molecules are combined to make a larger molecule are known as anabolic reactions.

Answer: <https://biology-forums.com/index.php?topic=501838>

Question 2800

Which of the following is NOT a location of reticular tissue?

- A) tendons
- B) lymph nodes
- C) spleen
- D) bone marrow

Answer: <https://biology-forums.com/index.php?topic=498580>

Question 2801

Which process of respiration relies on partial pressure gradients?

- A) pulmonary ventilation only
- B) pulmonary gas exchange and tissue gas exchange
- C) gas transport and pulmonary ventilation
- D) gas transport only

Answer: <https://biology-forums.com/index.php?topic=501594>

Question 2802

Which opening in the interatrial septum of the fetal heart connects the right and left atrium?

- A) fossa ovalis
- B) ligamentum arteriosum
- C) foramen ovale
- D) ductus arteriosus

Answer: <https://biology-forums.com/index.php?topic=501093>

Question 2803

Bundles of axons within a nerve are known as:

- A) dendrites.
- B) fascicles.
- C) the endoneurium.
- D) the perineurium.

Answer: <https://biology-forums.com/index.php?topic=500629>

Question 2804

What triggers the release of parathyroid hormone (PTH)?

- A) decreasing sodium ion concentration of the blood
- B) decreasing calcium ion concentration of the blood
- C) increasing potassium ion concentration of the blood
- D) increasing calcium ion concentration of the blood

Answer: <https://biology-forums.com/index.php?topic=502033>

Question 2805

The papillary layer of the dermis consists of loose connective tissue that is built for warmth and insulation.

Answer: <https://biology-forums.com/index.php?topic=498712>

Question 2806

What type of joint is a ball-and-socket joint?

- A) uniaxial joint
- B) multiaxial (triaxial) joint
- C) biaxial joint
- D) nonaxial joint

Answer: <https://biology-forums.com/index.php?topic=499013>

Question 2807

Summarize the surface barriers that provide a first line of defense against pathogens.

Answer: <https://biology-forums.com/index.php?topic=501510>

Question 2808

Identify the cavity that houses the heart.

Answer: <https://biology-forums.com/index.php?topic=498237>

Question 2809

A male has a _____ pelvic outlet when compared to a female's pelvic outlet.

- A) smaller
- B) wider
- C) larger
- D) longer

Answer: <https://biology-forums.com/index.php?topic=498910>

Question 2810

Polypeptide chains that contribute to a protein's quaternary structure each have their own primary, secondary, and tertiary structures.

Answer: <https://biology-forums.com/index.php?topic=498381>

Question 2811

Aldosterone regulates:

- A) blood calcium ion levels.
- B) blood glucose levels.
- C) blood iodide ion levels.
- D) extracellular sodium and potassium ion levels.

Answer: <https://biology-forums.com/index.php?topic=500993>

Question 2812

Carbon dioxide and water combine to form:

- A) hydrochloric acid.
- B) carbonic acid.
- C) carbaminohemoglobin.
- D) nitric acid.

Answer: <https://biology-forums.com/index.php?topic=501589>

Question 2813

Type IIb fibers produce the fastest, strongest twitches of any fiber type.

Answer: <https://biology-forums.com/index.php?topic=500377>

Question 2814

A cell or organ that responds to the directions of the control center in a negative feedback loop is termed a(n):

- A) stimulus.
- B) effector.
- C) receptor.
- D) regulator.

Answer: <https://biology-forums.com/index.php?topic=498206>

Question 2815

Explain the medial to lateral placement of the muscle groups of erector spinae.

Answer: <https://biology-forums.com/index.php?topic=500270>

Question 2816

What would most likely lead to an IPSP?

- A) opening of potassium ion channels
- B) opening of calcium ion channels
- C) opening of sodium ion channels
- D) closure of chloride ion channels

Answer: <https://biology-forums.com/index.php?topic=500447>

Question 2817

From superficial to deep, the pericardial sac consists of the fibrous pericardium, visceral pericardium, parietal pericardium, and the epicardium.
Answer: <https://biology-forums.com/index.php?topic=501157>

Question 2818

What does the countercurrent mechanism accomplish in the nephron loop?
A) production of very dilute urine
B) constriction of the arterioles to increase blood pressure
C) secretion of water and electrolytes into the filtrate
D) creation of a steep concentration gradient for continued water reabsorption
Answer: <https://biology-forums.com/index.php?topic=501940>

Question 2819

Astrocytes and tight junctions create a barrier to viruses and bacteria known as:
A) meninges.
B) dural sinuses.
C) choroid plexuses.
D) the blood-brain barrier.
Answer: <https://biology-forums.com/index.php?topic=500538>

Question 2820

The conducting region of the neuron is the:
A) axon.
B) axon terminals (synaptic knobs).
C) dendrites.
D) cell body.
Answer: <https://biology-forums.com/index.php?topic=500403>

Question 2821

Which of the following steps must occur first during the embryonic period?
A) formation of the primitive streak
B) gastrulation
C) embryonic folding
D) organogenesis
Answer: <https://biology-forums.com/index.php?topic=511318>

Question 2822

What will NOT stimulate the renin-angiotensin-aldosterone system (RAAS)?
A) an increase in systemic blood pressure
B) sympathetic nervous system stimulation
C) low glomerular hydrostatic pressure (GHP)
D) stimulation from the macula densa cells
Answer: <https://biology-forums.com/index.php?topic=501922>

Question 2823

The first stage of labor is:
A) dilation.
B) effacement.
C) expulsion.
D) propulsion.
Answer: <https://biology-forums.com/index.php?topic=511357>

Question 2824

Which of the following must happen first in the order events at a chemical synapse?
A) Ion channels respond to the neurotransmitter and lead to a local potential, or possibly an action potential.
B) Calcium ion channels in the axon terminal open.
C) Calcium ions cause synaptic vesicles to release neurotransmitters into the synaptic cleft.
D) Neurotransmitter binds to receptors on the postsynaptic neuron.

Answer: <https://biology-forums.com/index.php?topic=500445>

Question 2825

Select the letter that represents the left iliac (inguinal) region.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=498198>

Question 2826

How much urine is lost through obligatory water loss each day?

- A) 500 ml
- B) 2500 ml
- C) 1500 ml
- D) 5000 ml

Answer: <https://biology-forums.com/index.php?topic=502006>

Question 2827

What is the target tissue of erythropoietin (EPO)?

- A) breast tissue
- B) red bone marrow
- C) smooth muscle tissue
- D) adipocytes

Answer: <https://biology-forums.com/index.php?topic=501024>

Question 2828

Gary, who is sick with a cold, sneezed on you during lunch. Determine which line of defense provides initial protection for you.

Answer: <https://biology-forums.com/index.php?topic=501527>

Question 2829

Which of the following dissociates into ions when placed in water?

- A) nonelectrolyte
- B) glucose
- C) electrolyte
- D) starch

Answer: <https://biology-forums.com/index.php?topic=501993>

Question 2830

Mrs. Sanchez experienced a stroke in her cerebrum and now cannot see with one eye. Her family was told her stroke was situated in the frontal lobe. Did they receive correct information? Explain to support your answer.

Answer: <https://biology-forums.com/index.php?topic=500619>

Question 2831

Most levers in the human body are:

- A) first-class levers.
- B) second-class levers.
- C) third-class levers.
- D) fourth-class levers.

Answer: <https://biology-forums.com/index.php?topic=500193>

Question 2832

For which imbalance is the release of antidiuretic hormone (ADH) appropriate?

- A) acid-base imbalance
- B) fluid and electrolyte imbalance
- C) pH imbalance
- D) metabolic alkalosis

Answer: <https://biology-forums.com/index.php?topic=511145>

Question 2833

Immunodeficiency disorders can result from a failure of one component of the immune system.

Answer: <https://biology-forums.com/index.php?topic=501504>

Question 2834

What is the average value for mean arterial pressure (MAP)?

- A) 80 mm Hg
- B) 95 mm Hg
- C) 120 mm Hg
- D) 150 mm Hg

Answer: <https://biology-forums.com/index.php?topic=501212>

Question 2835

Surfactant helps prevent atelectasis by humidifying air before it enters the alveoli.

Answer: <https://biology-forums.com/index.php?topic=501633>

Question 2836

Where does sperm production occur within the testis?

- A) rete testis
- B) interstitial cells
- C) myoid cells
- D) seminiferous tubules

Answer: <https://biology-forums.com/index.php?topic=511189>

Question 2837

Identify the radial collateral ligament of the elbow.

- A) A
- B) B
- C) C
- D) D

Answer: <https://biology-forums.com/index.php?topic=499018>

Question 2838

Identify the popliteal region.

Answer: <https://biology-forums.com/index.php?topic=498231>

Question 2839

Larry's muscles weakened while he played tennis for hours on a hot summer afternoon. This inability to maintain intensity is defined as:

- A) hypotonia.
- B) muscle fatigue.
- C) atrophy.
- D) hypertonia.

Answer: <https://biology-forums.com/index.php?topic=500338>

Question 2840

What is released by the enteroendocrine cells of the gastric glands?

- A) gastrin
- B) pepsinogen
- C) hydrochloric acid (HCl)
- D) intrinsic factor

Answer: <https://biology-forums.com/index.php?topic=501668>

Question 2841

Predict water movement across a membrane by osmosis when a concentration gradient is present.

Answer: <https://biology-forums.com/index.php?topic=498472>

Question 2842

Cite two reasons for how the shoulder joint and hip joint are similar.

Answer: <https://biology-forums.com/index.php?topic=500174>

Question 2843

Explain why water is a key component of enzymatic hydrolysis.

Answer: <https://biology-forums.com/index.php?topic=501750>

Question 2844

Identify and describe the fibrous protein made by keratinocytes.

Answer: <https://biology-forums.com/index.php?topic=498723>

Question 2845

The brainstem performs higher level functions dealing with learning and memory.

Answer: <https://biology-forums.com/index.php?topic=500577>

Question 2846

Which cranial nerves have a negative chronotropic effect on heart rate?

- A) glossopharyngeal nerves (CN IX)
- B) vagus nerves (CN X)
- C) trochlear nerves (CN IV)
- D) hypoglossal nerves (CN XII)

Answer: <https://biology-forums.com/index.php?topic=501154>

Question 2847

Which statement best describes tendon sheaths?

- A) Tendon sheaths help anchor the tendon to the muscle.
- B) Tendon sheaths connect one bone to another to strengthen and reinforce articulating bones.
- C) Tendon sheaths protect long tendons as they course over and around synovial joints.
- D) Tendon sheaths are lined with dense irregular connective tissue.

Answer: <https://biology-forums.com/index.php?topic=498986>

Question 2848

Clonal selection occurs when:

- A) B cells are activated.
- B) B cells differentiate into plasma cells and memory B cells.
- C) plasma cells secrete antibodies.
- D) B cells undergo rapid mitosis.

Answer: <https://biology-forums.com/index.php?topic=501446>

Question 2849

Fluid balance in the human body is roughly equivalent to:

- A) water balance.
- B) pH balance.
- C) acid-base balance.
- D) nonelectrolyte balance.

Answer: <https://biology-forums.com/index.php?topic=501992>

Question 2850

The glomerulus is fed and drained by arterioles.

Answer: <https://biology-forums.com/index.php?topic=501972>

Question 2851

An atom with an atomic number of 13 has satisfied the octet rule and is inert.

Answer: <https://biology-forums.com/index.php?topic=498370>

Question 2852

During repolarization of a neuron:

- A) sodium ions move out of the cell.

- B) potassium ions move out of the cell.
- C) sodium ions move into the cell.
- D) potassium ions move into the cell.

Answer: <https://biology-forums.com/index.php?topic=500427>

Question 2853

Damage to the trapezius would cause a person to have difficulty:

- A) rotating the head.
- B) extending the head.
- C) elevating the rib cage.
- D) flexing the head.

Answer: <https://biology-forums.com/index.php?topic=500207>

Question 2854

From which of the following are ketone bodies assembled during ketogenesis?

- A) acetyl-CoA
- B) glucose
- C) glycerol
- D) NADH

Answer: <https://biology-forums.com/index.php?topic=501795>

Question 2855

Which type of joint is more stable - a hinge joint or a ball-and-socket joint? Explain and provide examples of each type.

Answer: <https://biology-forums.com/index.php?topic=500171>

Question 2856

The majority of sodium ions are reclaimed through sodium ion leak channels in the proximal tubule.

Answer: <https://biology-forums.com/index.php?topic=501979>

Question 2857

Vaccinations elicit a primary immune response so that secondary immune responses are rapid and symptoms are mild.

Answer: <https://biology-forums.com/index.php?topic=501502>

Question 2858

What part of the brain controls the thirst mechanism?

- A) cerebellum
- B) hypothalamus
- C) medulla oblongata
- D) pons

Answer: <https://biology-forums.com/index.php?topic=502009>

Question 2859

Which of the following fetal vascular shunts bypasses the liver?

- A) ligamentum arteriosum
- B) foramen ovale
- C) ductus venosus
- D) ductus arteriosus

Answer: <https://biology-forums.com/index.php?topic=511344>

Question 2860

The affinity of hemoglobin for oxygen increases with:

- A) increased body temperature.
- B) increased hydrogen ion concentration.
- C) increased partial pressure of carbon dioxide.
- D) slower metabolic rate.

Answer: <https://biology-forums.com/index.php?topic=501586>

Question 2861

What hormone(s) determines the basal metabolic rate at rest when fasting?

- A) catecholamines
- B) thyroid hormones
- C) insulin
- D) glucagon

Answer: <https://biology-forums.com/index.php?topic=501026>

Question 2862

List and describe the three ligaments that support the ovary, and the structures to which they are attached.

Answer: <https://biology-forums.com/index.php?topic=511276>

Question 2863

The posterior (dorsal) root of a spinal nerve and the posterior ramus are considered mixed nerves since they both carry sensory and motor information.

Answer: <https://biology-forums.com/index.php?topic=500693>

Question 2864

During the coagulation cascade, increased thrombin production encourages:

- A) plasmin to degrade fibrin.
- B) the initiation of fibrinolysis.
- C) the activation of factors V and VIII.
- D) the activation of factor X.

Answer: <https://biology-forums.com/index.php?topic=501354>

Question 2865

Which of the following is NOT an anabolic effect of testosterone?

- A) Testosterone increases the number of erythrocytes.
- B) Testosterone increases skeletal muscle mass.
- C) Testosterone increases bone density.
- D) Testosterone increases libido.

Answer: <https://biology-forums.com/index.php?topic=511213>

Question 2866

Mary's mosquito bite is red, warm, and swollen, indicating she is experiencing the effects of:

- A) the inflammatory response.
- B) interleukins.
- C) interferons.
- D) tumor necrosis factor (TNF).

Answer: <https://biology-forums.com/index.php?topic=501427>

Question 2867

What is NOT a primary effect of aldosterone?

- A) maintaining blood pressure
- B) maintaining blood glucose
- C) regulating extracellular fluid volume
- D) maintaining acid-base balance

Answer: <https://biology-forums.com/index.php?topic=500994>

Question 2868

The anterior and posterior tibial veins merge to form the:

- A) external iliac vein.
- B) medial plantar vein.
- C) femoral vein.
- D) great saphenous vein.

Answer: <https://biology-forums.com/index.php?topic=501261>

Question 2869

Somatic motor neurons innervate:

- A) skeletal muscle cells.
- B) cardiac muscle cells.

- C) glands.
- D) smooth muscle cells.

Answer: <https://biology-forums.com/index.php?topic=500733>

Question 2870

What is situated inferior to the conus medullaris of the spinal cord?

- A) posterior median sulcus
- B) cervical enlargement
- C) cauda equina
- D) lumbar enlargement

Answer: <https://biology-forums.com/index.php?topic=500545>

Question 2871

What are the primary cells of adaptive immunity?

- A) lymphocytes
- B) dendritic cells
- C) natural killer (NK) cells
- D) cytokines

Answer: <https://biology-forums.com/index.php?topic=501418>

Question 2872

Explain how nails grow.

Answer: <https://biology-forums.com/index.php?topic=498730>

Question 2873

Skin without keratin would be more likely to:

- A) lose the sensation of touch.
- B) tear upon being mechanically stressed.
- C) burn upon exposure to the sun.
- D) be unable to thermoregulate.

Answer: <https://biology-forums.com/index.php?topic=498662>