

### Question 1

Water moves out of filtrate in the nephron tubule into the interstitial fluid by

- A) capillary action.
- B) refinement.
- C) secretion.
- D) osmosis.

Answer: <https://biology-forums.com/index.php?topic=1882002>

### Question 2

The maximum amount of air that a human can inhale and exhale is called the

- A) tidal volume.
- B) vital capacity.
- C) residual volume.
- D) inhalation capacity.

Answer: <https://biology-forums.com/index.php?topic=1884025>

### Question 3

The loss of water from the leaves of plants is

- A) adhesion.
- B) cohesion.
- C) transpiration.
- D) osmosis.

Answer: <https://biology-forums.com/index.php?topic=1882389>

### Question 4

The brain and spinal cord are formed from

- A) the notochord, which is formed from mesoderm.
- B) the notochord, which is formed from endoderm.
- C) the neural tube, which is formed from mesoderm.
- D) the neural tube, which is formed from ectoderm.

Answer: <https://biology-forums.com/index.php?topic=1882105>

### Question 5

Which of the following factors is fundamentally responsible for the character of arctic tundra soils?

- A) secretion of acid by lichens and plant roots
- B) permafrost
- C) summer aridity
- D) abundant winter snow

Answer: <https://biology-forums.com/index.php?topic=1882542>

### Question 6

Mycorrhizal fungi are sometimes purposely introduced to new areas of land that are used for growing plants for commercial uses (e.g., landscaping, crop production, timber production). What would be the benefit of doing this?

- A) The fungi absorb toxic pesticides from the ground.
- B) The fungi help facilitate horticulture, agriculture, and forestry.
- C) The fungi promote the evolution of new fungus species.
- D) The fungi prevent competitive plant species from growing.

Answer: <https://biology-forums.com/index.php?topic=1883711>

### Question 7

Protecting the endangered black-footed ferret from extinction involved

- A) captive breeding and reintroduction.
- B) collecting individuals from multiple small populations and combining them into a single large population.
- C) vaccinating the remaining population against sylvatic plague.
- D) providing food during harsh winters.

Answer: <https://biology-forums.com/index.php?topic=1882723>

### Question 8

Gel electrophoresis sorts DNA molecules on the basis of their

- A) nucleotide sequence.
- B) ability to bind to mRNA.
- C) solubility in the gel.
- D) size.

Answer: <https://biology-forums.com/index.php?topic=1883334>

### Question 9

You are interested in designing an experiment to test the hypothesis that frogs use the same genetic code as humans. Which of the following experiments would not give you useful data to test this hypothesis?

- A) Purify tRNAs from frog cells and human cells and compare their structures.
- B) Insert a human gene into a frog cell and see if the correct protein is produced.
- C) Insert a frog gene into a human cell and see if the correct protein is produced.
- D) Compare nucleotide sequences of promoters from similar frog and human genes.

Answer: <https://biology-forums.com/index.php?topic=1883226>

### Question 10

Complete metamorphosis is considered to occur in a species

- A) if the larva and adult have different diets.
- B) if the larva and adult live in different habitats.
- C) if a pupation stage separates the larval and adult stages.
- D) if the adult has wings, but the larva does not.

Answer: <https://biology-forums.com/index.php?topic=1883762>

### Question 11

The core theme of biology, which explains both the unity and diversity of life, is

- A) genetics.
- B) ecology.
- C) evolution.
- D) metabolism.

Answer: <https://biology-forums.com/index.php?topic=1883376>

### Question 12

Which of the following statements regarding saltwater fish is true?

- A) The concentration of solutes in the internal fluids of saltwater fish is much lower than that in the surrounding water.
- B) The concentration of solutes in the internal fluids of saltwater fish is higher than that in the surrounding environment.
- C) Saltwater fish produce large amounts of diluted urine.
- D) Saltwater fish must visit freshwater streams and rivers entering the ocean to maintain the correct concentration of solutes in their internal fluids.

Answer: <https://biology-forums.com/index.php?topic=1881984>

### Question 13

High levels of which of the following hormones can suppress the body's immune system?

- A) glucagon
- B) mineralocorticoids
- C) glucocorticoids
- D) antidiuretic hormone

Answer: <https://biology-forums.com/index.php?topic=1882062>

### Question 14

A plant will only flower if the night length is longer than 14 hours. This plant is a

- A) long-day plant.
- B) short-night plant.
- C) short-day plant.
- D) day-neutral plant.

Answer: <https://biology-forums.com/index.php?topic=1882479>

### Question 15

Genetically modifying \_\_\_\_\_ cells may directly affect future generations.

- A) bone marrow
- B) somatic

- C) gamete-forming
- D) photoreceptor

Answer: <https://biology-forums.com/index.php?topic=1883330>

### Question 16

Based on the characteristics of the snakehead described, which of the following is most likely to be a productive strategy to reduce the spread of this species?

- A) extending the fishing season for prey fishes
- B) introducing a natural predator to feed on juvenile snakeheads
- C) capturing breeding snakeheads and sterilizing them so that they cannot breed any longer
- D) introducing algae and photosynthetic bacteria to reduce nutrient levels in the water

Answer: <https://biology-forums.com/index.php?topic=1882749>

### Question 17

Which is the most abundant kind of tissue in an animal, such as a gorilla?

- A) connective
- B) epithelial
- C) muscle
- D) nerve

Answer: <https://biology-forums.com/index.php?topic=1883871>

### Question 18

The endosymbiosis hypothesis proposes that

- A) two separate cells worked cooperatively and one benefited from the other.
- B) a small cell lived inside a larger cell to the benefit of both cells.
- C) a large cell engulfed and digested a smaller cell, exposing its enzymes for use by the larger cell.
- D) two cells merged into one cell, improving the enzyme function of the new cell.

Answer: <https://biology-forums.com/index.php?topic=1882873>

### Question 19

A thick filament consists of

- A) actin.
- B) actin and regulatory proteins.
- C) myosin.
- D) actin and myosin.

Answer: <https://biology-forums.com/index.php?topic=1882278>

### Question 20

Which of the following provides the best evidence to help develop a hypothesis about what is causing the difficulties faced by a coastal condor population?

- A) Sea lions, food for condors along the coast, live near an old dumping ground for a chemical manufacturing plant and have a significant amount of DDT in their blubber.
- B) Air currents along the coast are stronger, allowing coastal condors to cover more area in their search for prey.
- C) California bans ammunition containing lead (Pb) to prevent lead ingestion by condors feeding on carcasses of animals shot by hunters but not retrieved.
- D) Hatching success in birds farther from the coast was greater than that in birds along the coast.

Answer: <https://biology-forums.com/index.php?topic=1882555>