

### Question 1

Which of the following is a function of tracheids?

- A) food storage
- B) photosynthesis
- C) production of sex cells
- D) water conduction

Answer: <https://biology-forums.com/index.php?topic=1882328>

### Question 2

Recall that the cuticle seals plant surfaces and helps plants conserve water, and the seed helps derived plant groups to reproduce effectively on dry land. The analogous adaptations in reptiles are \_\_\_\_\_ (analogous to the cuticle) and \_\_\_\_\_ (analogous to the seed).

- A) scales; jellylike egg masses
- B) scales; the amniotic egg
- C) scales; aquatic larvae
- D) claws; lungs

Answer: <https://biology-forums.com/index.php?topic=1883802>

### Question 3

Which of the following options correctly lists the direction of carbon dioxide travel as it leaves the body?

- A) alveoli, bronchioles, bronchi, trachea, pharynx, larynx
- B) alveoli, bronchi, bronchioles, trachea, larynx, pharynx
- C) alveoli, bronchioles, bronchi, trachea, larynx, pharynx
- D) alveoli, bronchi, bronchioles, trachea, pharynx, larynx

Answer: <https://biology-forums.com/index.php?topic=1884015>

### Question 4

Which of the following is the first distinctively hominin trait to appear in the fossil record?

- A) sophisticated stone tools
- B) increased brain size
- C) upright walking (bipedalism)
- D) a very long period of parental care

Answer: <https://biology-forums.com/index.php?topic=1883828>

### Question 5

In evaluating the economic feasibility of genetically modified crops, which of the following is least likely to be a concern?

- A) resistance of the crop to disease
- B) amount of fertilizer needed for the crop
- C) amount of land available for the crop
- D) harm to humans caused by eating the crop

Answer: <https://biology-forums.com/index.php?topic=1882426>

### Question 6

In photosynthesis, the chemiosmotic production of ATP

- A) requires oxygen.
- B) is similar to the production of ATP in mitochondria.
- C) is done by the Calvin cycle.
- D) is a result of the oxidation of glucose.

Answer: <https://biology-forums.com/index.php?topic=1883033>

### Question 7

What is the name given to organisms that can make their own food and thus sustain themselves without consuming organic molecules derived from other organisms?

- A) chemotrophs
- B) heterotrophs
- C) synthesizers
- D) autotrophs

Answer: <https://biology-forums.com/index.php?topic=1882998>

### Question 8

Which of the following statements regarding thermodynamics is false?

- A) Thermodynamics is the study of energy transformations that occur in a collection of matter.
- B) A single cell or the planet Earth could be a thermodynamic system.
- C) An open system exchanges both energy and matter with its surroundings.
- D) An automobile engine is a closed system because it does not exchange energy and matter with its surroundings.

Answer: <https://biology-forums.com/index.php?topic=1882926>

### Question 9

A vascular cambium cell divides to produce an inner and an outer daughter cell. Which of the following represents the probable fate of these cells?

- A) Both cells continue to divide to produce wood.
- B) The inner cell will differentiate into xylem, and the outer cell will divide again.
- C) The inner cell will differentiate into phloem, and the outer cell will differentiate into xylem.
- D) Both cells will continue to divide without differentiating into specialized cells.

Answer: <https://biology-forums.com/index.php?topic=1882336>

### Question 10

Which of the following processes involves heat exchange between an animal and its environment?

- A) irradiation
- B) convection
- C) induction
- D) evaporation

Answer: <https://biology-forums.com/index.php?topic=1881977>

### Question 11

Which structure is the result of double fertilization?

- A) structure A
- B) structure B
- C) structure C
- D) structure D

Answer: <https://biology-forums.com/index.php?topic=1882376>

### Question 12

Which of the following statements regarding the comparison of DNA microarrays and qPCR is false?

While DNA microarrays can be used to determine whether or not a gene is expressed in a cell, quantitative polymerase chain reaction (qPCR) can be used to measure the extent of gene expression in cells and tissues. To perform qPCR, mRNA is extracted from cells and reverse transcribed to complementary DNA (cDNA). Using fluorescent DNA molecules that recognize specific gene sequences and DNA polymerase, copies of the gene sequence of interest are made. After the copies are made, a fluorescent detector measures the intensity of the fluorescent signal, which is proportional to the number of mRNA transcripts in the cell and corresponds to the level of gene expression in the cell.

- A) Both methods use fluorescent DNA molecules and cDNA.
- B) Both methods can determine whether a gene has been turned on or not.
- C) Both methods use mRNA extracted from cells.
- D) Both methods can quantify the levels of gene expression in cells.

Answer: <https://biology-forums.com/index.php?topic=1883307>

### Question 13

One of the evolutionary advantages of having two eyes is that

- A) two lenses provide greater magnification.
- B) overlapping fields of view provide uninterrupted images.
- C) there are more sensory neurons for greater action potentials.
- D) the blind spot is eliminated.

Answer: <https://biology-forums.com/index.php?topic=1882221>

### Question 14

In a large population of plants, notches in the leaves are caused by a dominant allele N and lack of notches by a recessive allele n. Over many generations the proportion of plants in the population with notched leaves increases. What is the most likely cause?

- A) Dominant alleles generally increase in frequency over time.
- B) The recessive alleles were all masked by the dominant alleles.
- C) Directional selection favored plants with notched leaves.

D) Genetic drift caused a steady movement toward a greater proportion of plants with notched leaves.

Answer: <https://biology-forums.com/index.php?topic=1883419>

### Question 15

Which of the following statements regarding animals is false?

- A) Animals that eat plants are called herbivores.
- B) Animals that eat meat are called carnivores.
- C) Animals that live in or on their food source and eat their way through it are called filter feeders.
- D) Animals that extract food particles suspended in the surrounding water are called fluid feeders.

Answer: <https://biology-forums.com/index.php?topic=1883906>

### Question 16

Habitats with many edges

- A) are the result of natural disasters.
- B) favor animals that prefer large, open ranges.
- C) often result from human activities.
- D) result in a significant increase in diversity.

Answer: <https://biology-forums.com/index.php?topic=1882725>

### Question 17

In many grocery stores, fresh fruits are sold in plastic bags dotted with holes so that they will not overripen. The main function of the holes is to

- A) permit the fruit to drain after being washed.
- B) facilitate diffusion of ethylene away from the fruit.
- C) prevent buildup of CO<sub>2</sub>.
- D) facilitate diffusion of O<sub>2</sub> to the fruit.

Answer: <https://biology-forums.com/index.php?topic=1882467>

### Question 18

Which of the following can contribute to high blood pressure?

- A) regular exercise
- B) eating a heart-healthy diet
- C) smoking
- D) maintaining proper weight

Answer: <https://biology-forums.com/index.php?topic=1881862>

### Question 19

Forest destruction would have the greatest impact on which arrow?

- A) arrow A
- B) arrow B
- C) arrow C
- D) arrow D

Answer: <https://biology-forums.com/index.php?topic=1882549>