

### Question 1

A population of caterpillars feeds on the leaves of trees in a forest and is in turn food for birds that eat them off the tree leaves. Given this information, which adaptation would be most likely to evolve?

- A) Caterpillars would evolve to a larger size.
- B) Caterpillars would evolve to eat the bark as well as the leaves.
- C) Birds would evolve to eat more types of insects.
- D) Caterpillars would evolve to a color that matched the leaves they eat.

Answer: <https://biology-forums.com/index.php?topic=606279>

### Question 2

Extracts of the rosy periwinkle, *Catharanthus roseus*, have provided medicine with vincristine and vinblastine, drugs now available for treating cancer. What human action promotes the ability to find this species of plant and discover its potential use for medicines?

- A) genetic engineering
- B) overexploitation
- C) preserving biodiversity
- D) supporting pharmaceutical industries

Answer: <https://biology-forums.com/index.php?topic=606559>

### Question 3

Which feature is necessary for a scientific hypothesis?

- A) It is able to be proven true.
- B) It is falsifiable.
- C) It is a theory about something.
- D) It is not based on observations.

Answer: <https://biology-forums.com/index.php?topic=605550>

### Question 4

Which assumption applies to the mark-recapture method?

- A) Marked individuals become "trap-happy" relative to unmarked individuals.
- B) Marked individuals avoid recapture, relative to unmarked individuals.
- C) Few individuals enter or leave the study area during the period between mark and recapture.
- D) The population size changes dramatically between the time of mark and recapture.

Answer: <https://biology-forums.com/index.php?topic=606464>

### Question 5

What will happen to a houseplant that's overwatered?

- A) The leaves will burst.
- B) The leaves will wilt.
- C) The flowers will leak excess water.
- D) It will grow faster than usual.

Answer: <https://biology-forums.com/index.php?topic=607152>

### Question 6

Which structure controls the activity of all the others?

- A) ovary
- B) testis
- C) hypothalamus
- D) pituitary gland

Answer: <https://biology-forums.com/index.php?topic=606870>

### Question 7

Which process occurs when a grapevine wraps around a trellis or another supporting structure?

- A) photoperiodism
- B) thigmotropism
- C) gravitropism
- D) phototropism

Answer: <https://biology-forums.com/index.php?topic=607193>

### Question 8

Through what process do deciduous plants drop their leaves?

- A) thigmotropism
- B) gravitropism
- C) abscission
- D) photoperiodism

Answer: <https://biology-forums.com/index.php?topic=607199>

### Question 9

What were the Ediacaran fauna?

- A) organisms that seem to be the first life on Earth
- B) symbiotic organisms that evolved into cellular organelles
- C) the first multicellular organisms found in the fossil record
- D) the most ancient ancestors of organisms in kingdom Protista

Answer: <https://biology-forums.com/index.php?topic=606424>

### Question 10

What process resulted in a dramatic increase in milk production in modern dairy cows?

- A) the insertion of beta carotene in the cow genome
- B) the use of recombinant bovine growth hormone
- C) frameshift mutations in the DNA of the cows
- D) the use of gene guns to insert new genes into the cow mammary tissues

Answer: <https://biology-forums.com/index.php?topic=606117>

### Question 11

Which factor may result in the actual carrying capacity of our planet being lower than initially calculated?

- A) The average American uses more resources than someone from another country.
- B) Modern food production relies on nonrenewable resources.
- C) NPP has been decreasing.
- D) The human population is growing much faster than was previously thought.

Answer: <https://biology-forums.com/index.php?topic=606492>

### Question 12

What is diffusion?

- A) one type of active transport
- B) the movement of water across a cell membrane
- C) the movement of molecules from an area of high concentration to an area of low concentration
- D) the movement of molecules across a membrane, assisted by proteins embedded in the membrane

Answer: <https://biology-forums.com/index.php?topic=605721>

### Question 13

Which factor would exert selection pressure on a population of insects?

- A) a new species of bird in the area
- B) a fire
- C) an earthquake
- D) the introduction of a population of feral cats into the area

Answer: <https://biology-forums.com/index.php?topic=606263>

### Question 14

Which is a common feature of cancer cells?

- A) anchorage dependence
- B) contact inhibition
- C) metastasis
- D) controlled division

Answer: <https://biology-forums.com/index.php?topic=605943>

### Question 15

What happens to the lactic acid created during fermentation in human muscle cells?

- A) It is directly converted into ATP.
- B) It donates a phosphate to ADP to recharge ATP.
- C) It goes to the liver, where it's converted into pyruvic acid.
- D) It joins with electrons and hydrogen ions to form H<sub>2</sub>O.

Answer: <https://biology-forums.com/index.php?topic=605811>

### Question 16

What does "hydrophobic" mean?

- A) made of water
- B) repelled by water
- C) attracted to water
- D) dissolved in water

Answer: <https://biology-forums.com/index.php?topic=605681>

### Question 17

How might global warming affect an animal species that has narrow temperature requirements?

- A) It may cause the expansion of the species' range.
- B) It may cause the extinction of the species.
- C) It may reduce the diseases that threaten the species.
- D) It may have no effect on the species.

Answer: <https://biology-forums.com/index.php?topic=605898>

### Question 18

A small mass of specialized muscle on the back wall of the right atrium, also known as the pacemaker, is medically known as what?

- A) atrioventricular node
- B) cardiopulmonary node
- C) bundle of His
- D) sinoatrial node

Answer: <https://biology-forums.com/index.php?topic=606781>

### Question 19

How did Wallace contribute to the history of ideas about evolution?

- A) He proposed the idea that Earth is very old.
- B) He was the main opponent of Darwin's ideas immediately after they were published.
- C) He proposed the theory of inheritance of acquired characteristics.
- D) He proposed a theory of evolution similar to Darwin's.

Answer: <https://biology-forums.com/index.php?topic=606192>

### Question 20

Which organelle performs photosynthesis?

- A) chloroplast
- B) Golgi apparatus
- C) lysosome
- D) mitochondrion

Answer: <https://biology-forums.com/index.php?topic=605747>