

Evolution and the Diversity of Life

Questions 1–25: Select the one best answer to each question.

1. Which of the following is *inaccurate* in relation to viruses?
 - A. They have nucleic acid core.
 - B. They feature a capsid.
 - C. They seek out a specific host.
 - D. They reproduce independently.
2. Which structure develops into a pollen grain?
 - A. Microspore
 - B. Anther
 - C. Megaspore
 - D. Archegonium
3. According to the theory of evolution, birds' feathers evolved from
 - A. fish fins.
 - B. gill slits.
 - C. reptile scales.
 - D. gill arches.
4. What type of skeleton helps an earthworm to move?
 - A. Exoskeleton
 - B. Hydrostatic skeleton
 - C. Bony endoskeleton
 - D. Spiny plates
5. Organisms that can interbreed and bear fertile offspring are considered to be in the same
 - A. order.
 - B. family.
 - C. class.
 - D. species.
6. *Most* fungi are
 - A. saprotrophic.
 - B. plant parasites.
 - C. producers.
 - D. unicellular.
7. _____ is/are the raw material of evolutionary change.
 - A. Genetic drift
 - B. Mutations
 - C. Nonrandom mating
 - D. Assortative mating

8. The term *molting* refers to the
- A. circulating of blood through a closed system.
 - B. movement with jointed appendages.
 - C. shedding of exoskeletons.
 - D. process of sexual reproduction.
9. What is the function of a nematocyst?
- A. Prey capture
 - B. Sensory perception
 - C. Locomotion
 - D. Digestion
10. In the lytic cycle, the term *maturation* refers to the
- A. translation of DNA.
 - B. integration of cDNA.
 - C. assembly of parts to produce viral particles.
 - D. penetration of the host cell wall.
11. Darwin argued that the beak size and shape of Galapagos finch species was related to their
- A. body size.
 - B. flight pattern.
 - C. food source.
 - D. time of reproduction.
12. You have a chart that illustrates a series of species with their common ancestor. This chart is called a/an
- A. fossil record.
 - B. cladogram.
 - C. gene pool.
 - D. five-kingdom system.
13. What is the function of the water vascular system in echinoderms?
- A. Excretion
 - B. Feeding
 - C. Locomotion
 - D. Protection
14. Which one of the following statements presents a condition of the Hardy-Weinberg principle?
- A. Gene flow is present.
 - B. Genetic drift occurs.
 - C. Random mating occurs.
 - D. Mutations are present.
15. Which of the following is an invertebrate?
- A. Lancelet
 - B. Lamprey
 - C. Shark
 - D. Duck-billed platypus
16. In evolution, the study of vertebrate forelimbs is related to _____ evidence.
- A. biogeographical
 - B. anatomical
 - C. biochemical
 - D. fossil
17. The distinction between protostomes and deuterostomes is based on differences in their
- A. digestive tracts.
 - B. nervous systems.
 - C. embryological development.
 - D. circulatory systems.
18. Which of the following is *not* a form of genetic recombination in bacteria?
- A. Conjugation
 - B. Transduction
 - C. Transformation
 - D. Binary fission

19. Industrial melanism is an example of _____ selection.
- A. directional
 - B. disruptive
 - C. sexual
 - D. stabilizing
20. Acquisition of the same or similar characteristics in distantly related lines of descent is called
- A. evolution.
 - B. convergent evolution.
 - C. evolution by natural selection.
 - D. evolution by mutation.
21. Darwin reasoned that if the world is very old, then
- A. taxonomy will have to give up the binomial system of nomenclature.
 - B. evolution couldn't have occurred.
 - C. geological changes occur over relatively brief periods of time.
 - D. there was time for evolution to occur.
22. Which one of the following statements describes a characteristic of amoeboids?
- A. They never have a shell.
 - B. They always live in fresh water.
 - C. They have pseudopods.
 - D. They're animals.
23. Which one of the following pairs represents a *correct* association?
- A. Mollusc—spider
 - B. Annelid—earthworm
 - C. Mollusc—leech
 - D. Annelid—octopus
24. The frequency of the dark form of the peppered moth increased in industrial areas of England during the nineteenth century. This was because
- A. predatory birds changed their preference from the light to the dark form.
 - B. the light form was more sensitive to deteriorating environmental conditions.
 - C. birds couldn't see the dark-colored moths on the trees darkened by industry.
 - D. the allele for dark color is dominant to that for light color.
25. Which one of the following plants is nonvascular?
- A. Moss
 - B. Cycad
 - C. Fern
 - D. Rosebush