

Classification p. 465

Multiple Choice: # 1 - 10

- | | |
|------|-------|
| 1. B | 6. D |
| 2. D | 7. D |
| 3. C | 8. C |
| 4. A | 9. B |
| 5. A | 10. C |

Short Answer: # 11 - 14; # 22 - 25

11. Biologists assign each organism a universally accepted name to provide consistency and avoid confusion.
12. Evolutionary relationships are used as well as structural similarities of the organisms.
13. Binomial nomenclature is useful to all scientists because each name is unique, a combination of the genus name and a term that is different for each species in the genus. Only one species can have that name so there is no confusion.
14. species, genus, family, order, class, phylum, kingdom
22. Members of the domain Bacteria are all unicellular and prokaryotic. Their cell walls contain peptidoglycan.
23. They are placed in the kingdom Archaea.
24. The four kingdoms that make up the domain Eukarya are: Animalia, Plantae, Protista, and Fungi.
25. Unlike members of the Plantae kingdom, members of the Animalia kingdom are heterotrophic, do not have cell walls, and are motile.

Bacteria and Viruses p. 493

Multiple Choice: # 1 - 10

- | | |
|------|-------|
| 1. A | 6. D |
| 2. A | 7. D |
| 3. B | 8. C |
| 4. B | 9. B |
| 5. A | 10. C |

Short Answer: # 12 - 14; # 20

12. The three most common shapes of prokaryotes are the rod-shaped bacilli, spherical-shaped cocci, and corkscrew, or spiral-shaped spirilli.

13. Gram-positive bacteria with a single cell wall layer absorb only the violet primary stain. Gram-negative bacteria have a thin layer of peptidoglycan. This layer absorbs the secondary (red) stain, so the bacteria appear red or pink.

14. Some prokaryotes move by flagella, some spiral forward, and some glide along on a slimelike material they secrete.

20. One thing all viruses have in common is that they enter living cell and, once inside, use the machinery of the infected cell to multiply.

Protists p. 523

Multiple Choice: # 1 and 2

1. C

2. C

Short Answer: # 11 and 13

11. Yes, the terms are useful because many protists have characteristics similar to those of animals, plants or fungi.

13. Ciliates use short, hairlike projections called cilia to move. The cilia beat, propelling the ciliate through water. Sarcodines use pseudopods for movement. The pseudopods extend out of the cell. Cytoplasm streams into the pseudopod, and the rest of the cell follows.