

Grade 9 Biology Workbook Questions

St John Baptist De La Salle Catholic School, Addis Ababa

22/23 Academic Year

Multiple Choice

1. A type of an unspecialized cell that is important for cell replacement and repair is
A. hemotopoetic stem cell B. embryonic stem cell C. adult stem cell D. None
2. Particles can move across the cell membrane without needing a transport or a carrier protein if they are
A. small B. uncharged C. lipid soluble D. All
3. All amino acids have a basic structure which consists of

A. an amino group, a carboxyl group, and a side chain
B. phosphate and alcohol groups
C. amino group and alchohol
D. glycerol
4. Which type of lipid is formed from a glycerol, two fatty acids, and a phosphate group?
A. Triglyceride B. Phospholipid C. Cholestrol D. Fat
5. The enzyme lipase is a catalyst for the hydrolysis of
A. ATP B. Proteins C. Lipids D. Carbohydrates
6. Which of the following is not a feature common to most animals?

A. development into a fixed body plan
B. asexual reproduction
C. specialized tissues
D. heterotrophic nutrient sourcing
7. Crustaceans are _____.
A. ecdysozoans B. nematodes C. arachnids D. parazoans
8. The circulatory fluid in echinoderms is _____. A. blood B. mesohyl C. water
D. saline
9. Which of the following is not a member of the phylum Chordata? A. Cephalochordata
B. Echinodermata C. Urochordata D. Vertebrata
10. . Which of the following situations will lead to natural selection?

A. The seeds of two plants land near each other and one grows larger than the other.

- B. Two types of fish eat the same kind of food, and one is better able to gather food than the other.
 - C. Male lions compete for the right to mate with females, with only one possible winner.
 - D. all of the above
11. The first forms of life on Earth were thought to be
- A. single-celled plants
 - B. prokaryotes
 - C. insects
 - D. large animals such as dinosaurs
12. Which reproductive combination produces hybrids?
- A. when individuals of the same species in different geographical areas reproduce
 - B. when any two individuals sharing the same habitat reproduce
 - C. when members of closely related species reproduce
 - D. when offspring of the same parents reproduce
13. What are usually the primary producers in an ocean grazing food web?
- A. plants B. animals C. fungi D. phytoplankton

Fill in the blank space

14. Active transport uses _____ to move substances from an area of _____ concentration to _____ concentration gradient.
15. A structure of a nerve cell that allows electrical impulses to transmit quickly is _____.
16. _____ are blood vessels that serve as sites for the exchange of substances with in the body.
17. _____ is a waste product of anaerobic respiration in humans.
18. _____ are tiny cells in out blood that form clots to prevent bleeding.
19. Mitochondria most likely evolved from _____.
20. The process whereby nitrogen is brought into organic molecules is called _____.
21. The weight of living organisms in an ecosystem at a particular point in time is known as _____.
22. Protists with the capabilities to absorb nutrients from dead organisms are called _____.

Explain the Following

23. Which chamber of the heart pumps blood to the lungs?

-
24. Write at least three common characteristics of all living things

 25. What is a monounsaturated fatty acid?

 26. Write at least two differences between viruses and bacteria.

 27. Which vessels contain valves to keep blood moving in one direction?

 28. Compare prokaryotic and eukaryotic cells.

 29. In what condition is a plant cell said to be turgid?

 30. Explain about the double circulatory system in humans.

 31. What are some of the properties of enzymes?

-
32. Describe three adaptations that allow for flight in birds.
33. What are the wing of a bird and the arm of a human examples of?
34. Galápagos medium ground finches are found on Santa Cruz and San Cristóbal islands, which are separated by about 100 km of ocean. Occasionally, individuals from either island fly to the other island to stay. This can alter the allele frequencies of the population through what mechanism?
35. What were the first organisms that oxygenated the atmosphere?
36. Why do mosses grow well in the Arctic tundra?
37. Two species of fish had recently undergone speciation. The males of each species had a different coloring through which the females could identify and choose a partner from her own species. After some time, pollution made the lake so cloudy that it was hard for females to distinguish colors. What might take place in this situation?
38. What are the factors that limit the length of food chains in ecosystems?