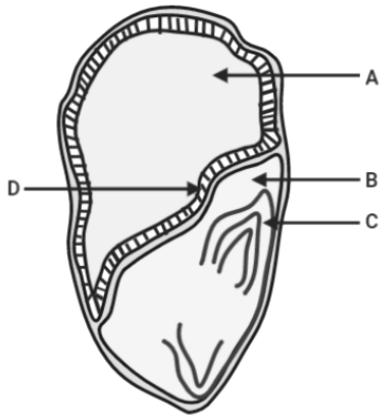
AUTUMN BREAK HOLIDAY HOMEWORK
CLASS: XI
SUBJECT:BIOLOGY

1. Name the scientist who gave binomial nomenclature. Write any three rules of naming an organism.
2. (a) Protoxylem is the first formed xylem. If the protoxylem lies next to phloem, what kind of arrangement of xylem would you call it?

   (b) In which vascular bundles, xylem and phloem are jointly situated on same radii?

   (c) Write the name of different types of cells present in xylem.

3. Label the diagram of a monocot seed.



4. Name the group whose organism shows pentamerous symmetry. Write any three characteristic features of these organisms.
5. Briefly explain the physiological relationships between the algal and fungal components of lichen.
6. Classify bacteria based on their shape and draw diagram of each group.
7. Explain the following

   (a) Comb plates

   (b) Bioluminescence

   (c) Ostia

8. Arthropoda is the most abundant group of animal kingdom. Enlist the features that are responsible for its abundance in animal kingdom?
9. Draw a neat and well label diagram of male reproductive system of a frog.
10. List out the differences between dicot stem and monocot stem.
11. **Directions:** Read the passages below and answer the questions

Cell membrane, also called plasma membrane, thin membrane that surrounds every living cell, delimiting the cell from the environment around it. Enclosed by this cell membrane are the cell's constituents, large, water-soluble, highly charged molecules such as proteins, nucleic acids, carbohydrates, and substances involved in cellular metabolism. Cell membranes are composed primarily of fatty-acid-based lipids and proteins. Membrane lipids are principally of two types, phospholipids and sterols (generally cholesterol). Both types share the defining characteristic of lipids—they dissolve readily in organic solvents—but in addition they both have a region that is attracted to and soluble in water.

i) Write the constituents of plasma membrane.

ii) Name the scientists who proposed the widely accepted Fluid Mosaic model.

iii) Enlist any two function of cell membrane?

iv) Which property of membrane is responsible for its quasi-fluid nature and how?

12. (a) Why reptiles became the first successful land animals?

    (b) Which features make mammals as most successful and dominant animals?

    (c) How bryophytes gametophyte is different from pteridophytes gametophyte?

13. (a) Write a brief note on the structure of virus.

    (b) Why seeds remain exposed in gymnosperms?

14. Differentiate between Chlorophyceae, Phaeophyceae and Rhodophyceae

15. Draw diagram of nucleus, mitochondria and chloroplast.

16. Differentiate between gymnosperm and angiosperm.

17. Why members of bryophyte are called as amphibious.

18. Explain virus, viroid and prion.

19. Draw diagram of bacteriophage.

20. Differentiate between conjoint collateral open and closed vascular bundles. Draw diagram also. Also mention where they are present.

21. Differentiate between hypogynous, perigynous and epigynous ovary.

22. Define alternate, opposite and whorled leaf. Draw diagram also.

23. Define cymose and racemose inflorescence giving one example of each.

24. How will you distinguish male frog from female frog.

25. Write down four characteristic features of monera and protista.