APEEFJAY SCHOOL, SAKET
FIRST TERMINAL EXAMINATION, 2012-13
BIOLOGY
CLASS-XI

TIME: 3 Hrs

General Instructions:
1. All questions are compulsory.
2. This question paper consists of four Sections A, B, C and D. Section -A contains 8 questions of 1 mark each,
   Section -B contains 10 questions of 2 marks each, Section -C contains 9 questions of 3 marks each and
   Section D contains 3 questions of 5 marks each.
3. There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one
   question of 3 marks and in all three questions of 5 marks. Attempt only one of the choices in such questions.
4. Wherever necessary, the diagrams drawn should be neat and properly labeled.

SECTION A

1. Define species. [1]
2. Identify the organism and its place in the plant kingdom. [1]

3. Which flagellated protozoan causes sleeping sickness? [1]
4. In which phylum does the first triploblastic animal appeared? [1]
5. Identify the types of placentaion. [1]

6. Indicate the location of cambium in a dicot stem. [1]
7. Name two eukaryotic cells that lack a nucleus at maturity? [1]
8. By which method cytokinesis occurs in a plant cell? [1]

Contd..
SECTION B

9. Cell membrane is also known as fluid mosaic model. Who proposed it and what does it mean? [2]
11. Distinguish between simple and compound epithelium. [2]
12. Give the difference between the vascular bundles of monocot and dicot stem. [2]

OR

Distinguish between spring wood and autumn wood. [2]
13. What is periderm? How is the age of a tree calculated? [2]
14. Give the floral formula of the following: [2]

15. Leaves are modified to carry out certain functions. Identify the functions in the following plants:
   (a) Cactus (b) Peas (c) Onion (d) Pitcher plant. [2]
16. "All vertebrates are chordates but all chordates are not vertebrates." Justify the answer. [2]
17. Give economic importance of bryophytes. [2]

SECTION C

19. Observe the cell cycle given below and answer the following:

   ![Cell Cycle Diagram]

Contd..
a) Number of chromosomes (N) in S and M/mitosis) stage.
b) Amount of DNA content (C) in S and M/mitosis) stage.
c) Differentiate between G1 and G2 phases of Interphase.

20. Discuss about three types of muscle tissues.

OR

Discuss about different types of specialized connective tissue.

21. What is a centromere? Classify chromosomes based upon the position of their centromere.

22. Differentiate three types of permanent tissues found in plants based on their structure and function.

23. What is racemose inflorescence? How is it different from cymose inflorescence? Explain with diagrams.

24. Describe the Watson-Crick model of DNA.

25. Identify the type of coelom and give an example of each.

26. Classify algae based on: major pigments, stored food and give one example for each.

27. a) Give reasons for the following:
   i) Vegetable oil does not solidify in winters.
   ii) DNAs are negatively charged.
   b) What does an enzyme do in terms of energy requirement of a reaction?

**SECTION D**

28. The drawing represents a vertical section through a leaf x 200
   (a) Name the parts indicated by the letters A – D.
(b) What is the function of C?
(c) (i) Name the features represented in the diagram, which are thought to adapt the leaf to its function in photosynthesis.
(ii) What will happen if all the plants are removed from the Earth's surface as a result of deforestation?

29. Draw the life cycle of pteridophyta.

30. Draw diagram to explain the stages of mitosis in animal cell.
   OR
   Draw the ultrastructure of mitochondria and give its major function.