First Year Botany Model Paper

Time : 3 Hours   *Max.Marks :60*

SECTION A

Note : Answer all questions. Each answer may be limited to 5 lines.   **10 x 2 = 20**

1.   What is flora?

2.   What is the principle underlying the use of cyanobacteria in agricultural fields for crop improvement?

3.   Mention the fern characters found in *Cycas*.

4.   Define placentation. What type of placentation is found in *Dianthus*?

5.   Define mericarp. In which plant you find it?

6.   Give the technical description of ovary in *Solanum nigram*.

7.   What is the significance of vacuole in a plant cell?

8.   What is middle lamella made of? What is its functional significance?

9.   If a tissue has at a given time 1024 cells. How many cycles of mitosis had the original parental single cell undergone?

10.   Define population and community.

SECTION B

Note: Answer any six questions. Each answer may be limited to 20 lines   **6 x 4 = 16**

11.   Give a brief account of Dinoflagellates.

12.   Differentiate between red algae and brown algae.

13.   Distinguish between asexual and sexual reproduction. Why is vegetative reproduction also considered as a type of asexual reproduction?

14.   Describe the essential organs of Solanaceae.

15.   Name the two cell organelles that are double membrane bound. State their functions and draw labeled diagrams of both

16.   Nucleic acid exhibits secondary structure, justify with example.

17.   What is periderm? How does periderm formation take place in the dicot stems?

18.   List out the anatomical adaptations of hydrophytes.

SECTION C

Note: Answer any two questions. Each answer may be limited to 60 lines   **2 x 8 = 16**

19.   Define root modifications. Explain how the root is modified to perform different functions.

20.   Draw the diagram of a microsporangium and label its wall layers. Write briefly about the wall layers.

21.   Describe the internal structure of dorsiventral leaf with the help of labeled diagram.