

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 Palaeobotany? What is its use?
3. Mention the fern characters found in *Cycas*.
4. What is the morphology of cup like structure in *Cyathium*? In which family it is found?
5. What is the type of fruit found in mango? How does it differ from that of coconut?
6. What is Natural system of plant classification? Name the scientists who followed it.
7. What is middle lamella made of? What is its functional significance?
8. Explain the zwitterionic form of an amino acid.
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. Give economic importance of plants belonging to Fabaceae.
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. State the location and function of different types of meristems.
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.