

## VTM NSS COLLEGE DHANUVACHAPURAM

### Core course

**BO 1141.** Angiosperm Anatomy, Reproductive Botany & Palynology

#### 2 Marks questions

1. Organization of root apex
2. Diffuse porous wood
3. Function of lenticels in plants
4. Raphides
5. Comment on anther wall layers
6. Function of synergids
7. Tyloses
8. Differentiate between amphivasal and amphicribal
9. Quiescent center
10. List the components of ground tissue system
11. What are motor cells ? Mention its functions.
12. List the process of fertilization in plants
13. What are tracheids ? Mention its functions.
14. Write any two differences between monocot stem and monocot root.
15. Differentiate between primary meristem and secondary meristem
16. What is a sap wood ?
17. Passage cells
18. List the different kinds of secondary wall thickening in vessels
19. Write a short note on Utricle bodies.
20. Korper Kappe theory
21. Differentiate storied and non storied cambium.
22. Describe NPC system
23. Triple fusion
24. Describe the structure of primary cell wall
25. Differentiate proto xylem and meta xylem.
26. What is stomium ?
27. Define obturator.
28. What is tapetum ?
29. What are the components of periderm ?
30. Define phellogen.
31. What is nucellus ?
32. Brachy sclereids
33. Diacytic stomata
34. Bicollateral vascular bundles
35. Differentiate heart wood and sap wood
36. Write short note on essential oils.

37. Write a short note on companion cells.
38. Differentiate integument and funiculus.
39. Describe the development of monosporic embryo sac .
40. What are annual rings?

#### **4 marks questions**

1. Compare Histogen theory and Tunica Corpus theory.
2. Describe the features of dicot embryo.
3. Explain the organization of root apex in detail
4. Explain the periderm formation in dicot root.
5. Give an account of laticifers.
6. Describe the anatomy of a dicot leaf.
7. With a neat and labelled diagram explain an orthotropous ovule.
8. Describe the dehiscence of an anther.
9. Comment on the nuclear type of endosperm.
10. Write short notes on barriers of fertilization.
11. Describe the structure of a lenticel
12. How meristems are classified based on position.
13. Write short note on pollen allergy.
14. Explain the structure of a monocot embryo.
15. Differentiate between amoeboid tapetum and secretory tapetum.
16. Describe the economic and taxonomic significance of palynology.
17. What is double fertilization ? Explain its events in detail
18. Describe the structure of a dicot root.
19. What are the different types of stomata seen in dicot plants.
20. Describe the structure of Adoxa type embryo sac.
21. Describe the various types of vascular bundles seen in angiosperms.
22. What is periderm ? Explain its structure.
23. Write a short note on mineral crystals seen in plants.
24. Describe the structure of a pollen wall.
25. Describe the structure of an isobilateral leaf.
26. Describe the anomaly noticed in Dracaena.
27. Describe the various types of endosperm.
28. Briefly explain the extra stellar secondary growth.
29. Write note on barriers of fertilization.
30. What are pits ? How they are classified?
31. Differentiate cystoliths and raphides.
32. Explain the difference between proto xylem and meta xylem.
33. Explain the extra cell wall materials seen in plants.
34. Explain the important features of pollen.
35. Describe the anomalous structures in Boerhavia.
36. Give an account on non living inclusions in a plant cell.
37. Describe the structure of an embryo sac.
38. Give a brief account on phloem.

39. What are the functions of cell wall.?
40. Enumerate different types of cross pollination.

### **15 Marks questions**

1. Write an essay on microsporogenesis.
2. Describe in detail the different tissue systems.
3. What are complex tissues ?. Describe the different components of phloem.
4. Write an essay on the structure, classification and functions of simple permanent tissues.
5. Draw a labelled cellular diagram of the T.S of a mature anther. Explain its structure.
6. Explain the various theories of apical organization of root apex in plants.
7. Give an account of the anomalous secondary growth in Bignonia with diagram.
8. Write the process of embryo development. Add a note on the nutrition of developing embryo.
9. What are the various types of endosperm formation in dicot plants. Describe each with neat and labelled diagrams.
10. Explain the structure and functions of cell wall.
11. Give an account of meristematic tissues.
12. Describe the secondary growth in dicot stem.
13. Compare the primary structure of dicot stem and dicot root with ground plan.
14. What is pollination ?. Explain different types and contrivances.
15. With a neat and labelled diagram explain the anomalous secondary growth in Dracaena stem.
16. Describe the different types of embryosacs with suitable diagrams.
17. What are the features of meristematic tissues?. Discuss various types of meristems and their functions.
18. Describe the anomalous secondary thickening in Boerhaavia with labelled diagrams.
19. Describe the non living inclusions seen in plants.
20. Give a detailed description on the various processes involved in megasporogenesis and megagametogenesis in angiosperms.