

I S Sadan

Subject Title: Plant Anatomy & Embryology

Prepared by: Ms Noori Sultana

Year: II

Semester: III

Updated on: 7-12-2020

Unit - I: Plant Anatomy

1. Describe various theories regarding the organisation of Stem apex.
2. Theories regarding the organisation of Root apex.
3. Describe the structure, distribution and function of different types of Simple tissues.
4. What are Special tissues? Describe its various types.

Unit - II: Wood Anatomy

5. What is Anomalous secondary growth? Explain its various reasons in Dicots and Monocots.
6. Anomalous secondary growth in A) Boerhaavia stem B) Bignonia stem C) Draceana stem.
7. Write an account on the physical and chemical properties of wood and add a note on its uses.
8. Give the importance of Teak as timber plant. Mention the properties of teak wood.

Unit III- Embryology A

9. Give an account of Microsporogenesis in angiosperms.
10. Development of Male gametophyte in angiosperm.
11. Describe the various parts of an angiospermic Ovule.
12. Structure of a mature Embryosac in angiosperms.
13. Structure of Tetrasporic embryosac.

Unit - IV: Embryology

14. Write an essay on pollen morphology.
15. What is Cross pollination? Explain its various contrivances with suitable examples and diagrams.
16. Explain the process of Fertilization in angiosperms.
17. Development of Embryo in Dicot plants.
18. Development of Embryo in Monocot plants.

Short Questions- Unit - I

19. Meristems and its types.
20. Tunica-corpus theory.
21. Histogen theory.
22. Kappe theory.
23. Structure and types of Collenchyma.
24. Hydathodes.
25. Laticiferous tissues.
26. Trichomes.
27. Types of stomata.
28. Anatomy of Acacia phyllode.
29. T.S of Nymphaea petiole.

30. T.S of Achyranthes stem.

31. Beta vulgaris root.

Unit – II

32. Types of vascular systems.

33. Uses of Wood.

34. Rose wood.

35. Neem.

36. Nallamaddi.

37. Red sanders.

Unit - III

38. T.S of Anther wall.

39. Types of Ovules.

40. Bisporic embryo sac.

41. Monosporic: Oenothera type of embryosac.

42. Nemec phenomenon.

43. Hypostase and Epistase.

44. Tapetum and its types.

Unit IV

45. Nuclear, Cellular & Helobial type of endosperm.

46. Adventive polyembryony.

47. Polyembryony.

48. Apomixis.

49. Ruminant endosperm.

50. Aleurone layer.

51. Self –incompatibility.

52. Pollen – pistil interaction.

53. NPC Classification.

54. Sporoderm.

55. Self-pollination contrivances.

56. Entomophily.

57. Hydrophily.

58. Dichogamy.

59. Abiotic pollinating agents (water and air).

60. Pollen grain apertures.

61. Advantages of cross pollination.