

SUBJECT CODE: 15BT/MC/AE44

B.Sc. DEGREE EXAMINATION, APRIL 2019
BRANCH V(a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FOURTH SEMESTER

COURSE : MAJOR – CORE
PAPER : ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS
TIME : 3 HOURS MAX. MARKS: 100

SECTION-A

A. ANSWER THE FOLLOWING **18 Marks**

I. Choose the correct answer **(1x5=5)**

1. Phellogen is a type of
a.cork cambium b.vascular cambium c.fascicular cambium d.interfascicular cambium
2. Phloemfibres are otherwise called as
a.woodfibre b.bastfibre c.vascularfibre d.septatefibre
3. Scatteredlyarranged vascular bundles are present in
a.monocot root b.dicot root c.monocot stem d.monocot leaf
4. Palisade tissue develops in
a.dicot leaf b.monocot leaf c.isobilateral leaf d.all the above
5. Triploid tissues present in
a.endosperm b.zygote c.tapetum d.nucellus

II. Fill in the blanks: **(1x5=5)**

- 6.Interfascicular cambium gives rise to _____ cells.
- 7.The study of annual rings is called as _____.
- 8.Tetrarch protoxylem points are present in_____.
- 9.Guard cells are present in_____.
- 10.Monosporicpolygonum type of embryo sac consists of _____ nucleus

III. State True or False **(1x4=4)**

11. Vascular cambium is a lateral meristem
12. Companion cells are present in monocot plants
13. Cuticle develops in root epidermis
14. Polyembryony is common in angiosperms

IV.Match the following **(1x4=4)**

15. Root cap - embryo sac
16. Synergids - root
17. Tyloses - stem
18. Endarch - xylem

V. ANSWER ANY SIX OF THE FOLLOWING QUESTIONS IN 50 WORDS EACH:
(6x3=18)

19. Commercial bark
20. Lenticels
21. Differentiate heart wood from sap wood
22. Types of fibres
23. Activation of fascicular and interfascicular cambium.
24. Abscission.
25. Epidermal hairs.
26. Double fertilization.
27. Polyembryony.

SECTION-B

ANSWER ANY FOUR OF THE FOLLOWING QUESTIONS IN ABOUT 200 WORDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY.
(4x6=24)

28. Describe the types and importance of meristem.
29. Explain the development of annual rings.
30. Write a note on the anomalous structure in dicot plants.
31. Describe in detail the structure of an isobilateral leaf.
32. Explain the structure of anther.
33. Give the significance of apomixis.

SECTION-C

ANSWER ANY TWO OF THE FOLLOWING QUESTIONS IN ABOUT 1000 WORDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY.
(2x20=40)

34. Write an essay on cork cambium.
35. Give a detailed account on xylem tissue.
36. Describe the structure and types of stomata.
37. Write in detail about the structure and types of endosperms.
