

SUBJECT CODE: 15BT/MC/AE44

B.Sc. DEGREE EXAMINATION, APRIL 2018
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. The tips of the stem and root are composed of
a) Simple tissue b) Laticiferous tissue c) Complex tissue d) Meristematic tissue.
2. A layer of cambiumlike cells produced at the base of leaf (or) pedicel is known as.....
a) Phelloderm b) Interfascicular cambium c) Abscission layer d) Intrafascicular cambium.
3. Abnormal secondary growth is found in
a) Dracaena b) Helianthus c) Triticum d) Cucurbits
4. On fertilization the secondary nucleus forms
a) Seed b) Embryo c) Endosperm d) Cotyledons
5. In normal dicot leaf the phloem in the mid rib faces....
a) Upper epidermis b) Lower epidermis
c) Center of the vascular bundle d) Non of the above

II. Fill in the blanks:

(1x5=5)

6. The is made up of one or several layers of cells and encloses the corpus or central core of tissue.
7. The vascular bundle of dicot stem is said to be open, because of the presence of.....
8. In monocot leaf the guard cells are shaped.
9. In dicot ovary the place where the funicle enters the ovule is called.....
10. Ruminant endosperm is seen in.....

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

11. Collateral vascular bundles are characteristic feature in roots.
12. The parenchymatous tissue surrounding and in between the vascular bundle is called conjunctive tissue.
13. The phellogen is a lateral meristem.
14. Thin cuticle is present in hydrophytes.

IV. Match the following

(1x4=4)

- | | | |
|-----------------------|----|-----------|
| 15. Companion cells | -- | monocot |
| 16. Phellem | -- | synergids |
| 17. Isobilateral leaf | -- | phloem |
| 18. Egg cells | -- | cork |

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

19. Xylem rays
20. Nucellus
21. Lenticels.
22. Centric leaf .
23. Cork cambium.
24. Tyloses.
25. Helobial endosperm.
26. Tapetum.
27. Hydathodes.

SECTION-B

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

28. Describe the protective tissues of monocot plants.
29. Describe the formation and structure of vascular cambium in dicot plants.
30. Write notes on epidermal hairs and appendages.
31. Write notes on apomixes.
32. What are annual rings?
33. Describe the process of leaf Abscission.

SECTION-C

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

34. Describe the development of dicot embryo.
35. Write an essay on secondary phloem.
36. Describe secondary growth in a normal dicot root.
37. Describe the anomalous secondary growth in any one dicot stem.
