E 5477 (Pages : 3) Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2013

Fourth Semester

Core Course—ANATOMY AND REPRODUCTIVE BOTANY OF ANGIOSPERMS

(2011 Admission)

Time : Three Hours Maximum Weight : 25

Part A (Objective Type Questions)

Answer **all** *questions.*
Each bunch of four questions carries a weight of 1.

BUNCH I

Choose the correct answer :

1. Which among the following is a secondary metabolite ?
   (a) Alkaloids. (b) Starch.
   (c) Protein. (d) Sugar.
2. Casparian strips are seen in the cells of :
   (a) Epidermis. (b) Cambium.
   (c) Stomata. (d) Endodermis.
3. The condition in which gynoecium matures first in a flower is called :
   (a) Protandry. (b) Protogyny.
   (c) Dioecy. (d) Cleistogamy.
4. The layer of anther wall that nourishes the microspore is :
   (a) Middle layer. (b) Endothecium.
   (c) Tapetum. (d) Epidermis.

BUNCH II

Match the following :—

5. Growth rings — Microsporogenesis.
6. Cambium — Transpiration.
7. Anther — Dendrochronology.
8. Stomata — Wound healing.

Turn over

BUNCH III

State whether true *or* false :

9. Annual growth rings are seen in secondary wood.
10. Vascular bundles are scattered in dicot stem.
11. Anatropous ovule is common in Angiosperms.
12. Protoxylem lacuna is seen in dicot stem.

BUNCH IV

Fill in the blanks :

13. Protoplasmic connections seen in the cell wall is called ————.
14. The protective layer of cells in roots is called ————.
15. Subsidiary cells are associated with ————.
16. ———— is the outer wall of pollen grains.

(4 × 1 = 4)

Part B (Short Answer Questions)

Answer any **five** *of following, Weight* 1 *each.*

17. Distinguish radicle from plumule.
18. What is quiescent centre ?
19. What are companion cells ?
20. What is meant by performation plate ?
21. What is Placentation ?
22. What are bulliform cells ?
23. What is syngamy ?
24. Write any *two* functions of nectars.

(5 × 1 = 5)

Part C (Short Essay/Problem Solving Questions)

Answer any **four** *of following, Weight* 2 *each.*

25. Explain the importance of Sclerenchyma.
26. Briefly explain the functions of cambium.
27. Explain the any *two* types of Placentation with examples.
28. Explain how endosperm is formed. Add a note on its significance ?
29. Describe the different types of anthers.
30. Describe briefly how periderm is formed.

(4 × 2 = 8)

Part D (Essays Type Questions)

Answer any **two** *of following, Weight* 4 *each.*

31. Describe the types of embryo sacs in angiosperms studied by you.

32. Describe the theories of stem apex you have studied.

33. Explain the different types of vascular bundles in stem with suitable diagrams.

$(2 \times 4 = 8)$