

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086

(For candidates admitted from the academic year 2004-05 thereafter)

SUBJECT CODE: BT/MC/AA44

B.Sc. DEGREE EXAMINATION, APRIL 2007

**BRANCH V(a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FOURTH SEMESTER**

COURSE : MAJOR – CORE

PAPER : ANATOMY OF ANGIOSPERMS

TIME : 3 HOURS

MAX. MARKS : 100

SECTION –A

ANSWER ALL QUESTIONS

I. CHOOSE THE CORRECT ANSWER:

(8 MARKS)

1. Growth in thickness of the plant body is due to
a) Apical meristem b) Lateral meristem c) Intercalary meristem
d) Promeristem
2. Tunica corpus theory was put forward by
a) Clowes b) Hanstein c) Schmidt d) None of them.
3. The tissue meant for secondary growth is
a) Cortex b) Xylem c) Phloem d) Cambium
4. The collenchyma gets thickened due to the deposition of
a) Lignin b) Cutin c) Suberin d) Pectin
5. The vascular bundles are open and arranged in a ring in
a) Monocot root b) Monocot stem c) Dicot stem d) Dicot root
6. The root hair of a plant cell is
a) Acellular b) Unicellular c) Multicellular d) Both unicellular and
acellular
7. The companion cells occur in
a) Bryophytes b) Pteridophytes c) Gymnosperms d) Angiosperms
8. The outgrowths developing in the lumen of the xylem vessels are called
a) Tyloses b) Periderm c) Pits d) Cork

II. MATCH THE FOLLOWING:

(5 MARKS)

9. Tracheids - endarch
10. Leaf - quiescent centre
11. Stem - water stomata
12. Root - palisade tissue
13. Hydathodes - dead cells

III. FILL IN THE BLANKS:**(5 MARKS)**

14. The chemical present in the middle lamella is _____
15. When a tree grows older _____ increases rapidly in thickness
16. The tissue concerned with secretion of gums or latex is called _____.
17. Exchange of gases in leaves takes place through _____
18. The vascular bundles in a dicot stem are _____ and _____.

IV. ANSWER ANY SIX IN 50 WORDS:**(6 x 3 = 18)**

19. Meristem
20. Tracheids
21. Collateral bundles.
22. Collenchyma.
23. Lenticel
24. Growth ring
25. Periderm
26. Sap wood
27. Leaf trace

SECTION – B**V. ANSWER ANY FOUR IN 200 WORDS EACH:
DRAW DIAGRAMS WHEREVER NECESSARY****(4 x 6 = 24)**

28. Write notes on meristem according to their position and function.
29. Write briefly on the vessels.
30. Describe the abscission of leaves.
31. Draw and describe the T.s of a dicot stem.
32. Distinguish sap wood and heart wood.
33. Give an account on the anatomy of a dorsiventral leaf.

SECTION - C**VI. ANSWER ANY TWO IN 1000 WORDS EACH:
DRAW DIAGRAMS WHEREVER NECESSARY****(2 x 20 = 40)**

34. Classify the tissues. Describe their different types with the help of neat diagrams.
35. Draw and describe the internal structure of monocot root. How does it differ from a dicot root.
36. Describe the anomalous growth in Dracaena.
37. Write notes on

a) Root apex	b) Sieve tubes
b) Tyloses	d) Commercial cork
