

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**

**(For candidates admitted from the academic year 2008-09)**

**SUBJECT CODE: BT/MC/AE44**

**B.Sc. DEGREE EXAMINATION, APRIL 2010  
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 (1X18=18 )**

**I. Choose the correct Answer**

1. Entry of pollen tube through the micropyle at the time of fertilization is called  
a) Porogamy                                      b) Mesogamy                                      c) Chalazogamy
2. Phellogen is a  
a) Secondary meristem                      b) Primary meristem                      c) Intercalary meristem
3. The function of tapetum is  
a) Nutritive                                      b) Dehiscence                                      c) Protective
4. Endosperm is  
a) Triploid                                      b) Haploid                                      c) Diploid
5. Tunica corpus theory is based on  
a) Cell division                                      b) Differential staining                                      c) both

**II. Fill in the blanks :**

6. Quiescent centre theory is proposed by \_\_\_\_\_
7. The cell wall material of endodermis is \_\_\_\_\_
8. Fibres associated with secondary phloem are called as \_\_\_\_\_
9. The Female gametophyte of *Peperomia* consists of \_\_\_\_\_ celled structure
10. The ruminant type of endosperm is present in \_\_\_\_\_.

**III . Match the following**

- |               |                        |
|---------------|------------------------|
| 11. Endarch   | a) Complementary cells |
| 12. Exarch    | b) Guard cells         |
| 13. Lenticels | c) Root                |
| 14. Stomata   | d) Stem                |

**IV. State true or false**

15. Schuepp proposed Korper Kappe theory
16. Presence of inverted bundles is seen in *Nyctanthes* stem
17. Age of tree can be calculated by the number of annual rings
18. Trilacunar node is primitive than unilacunar node.

**B. Answer any six from the following :****(6x3=18 )**

19. Dendrochronology
20. Tyloses
21. Bulliform cells
22. Vascular cambium
23. Leaf abscission
24. Apomixis
25. Endothelium
26. Endosperm
27. Lenticels

**Section-B****Answer any Four of the following in about 200 words.****(4x6=24)**

27. Explain anomalous secondary growth in *Dracaena* stem
28. Describe the different types of nodal anatomy
29. Write the classification of meristem
30. Give an account on Phloem
31. With a labelled diagram describe the internal structure of isobilateral dicot leaf
32. Explain the phenomenon of double fertilization.

**Section-C****Answer any two of the following in about 1000 words.****(2X20=40)**

33. Describe secondary growth in dicot stem
34. Give an account on xylem
35. Explain the theories relating to apical organization of shoot
36. Describe microsporogenesis

**\*\*\*\*\***