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# MAR IVANIOS COLLEGE (AUTONOMOUS) THIRUVANANTHAPURAM

Reg. No.:	Name:
First Semester B.Sc. Degree	Examination, November 2014
First Degree Progra	amme under CBCSS
Core Cours	se: Botany – I
AUBO141: Angiosperm Anatomy, l	Reproductive Botany and Palynology
Time: 3 Hours	Max. Marks: 80

## SECTION - A

Write short notes on **ALL** the following.

- 1. Calyptrogen
- 2. Endothecium
- 3. Lenticels
- 4. Cystolith
- 5. Colporate pollen grains
- 6. Tyloses
- 7. Filiform apparatus
- 8. Casparian thickening
- 9. Dendrochronology
- 10. What are laticiferous tissues? Give an example.

 $(10 \times 1 = 10 \text{ Marks})$ 

## **SECTION - B**

Answer any **EIGHT** questions, not exceeding one paragraph.

- 11. Differentiate sap wood and heart wood.
- 12. Differentiate simple pit and bordered pit.
- 13. Explain the organization of stem apex based on Tunica Corpus theory.
- 14. Differentiate anomocytic stomata from anisocytic stomata.

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- 15. Differentiate schizogenous and lysigenous cavities.
- 16. What are plasmodesmata? Explain its function.
- 17. What is pollenkitt? Mention its function.
- 18. Describe the significance of double fertilization.
- 19. Differentiate monocot embryo from dicot embryo.
- 20. What are passage cells? Mention their importance in plants.
- 21. Mention the differences between tracheids and vessels.
- 22. 'The apical meristem in root is not terminal'. Justify the statement.

 $(8 \times 2 = 16 \text{ Marks})$ 

## SECTION - C

Short essay type: Answer any SIX questions.

- 23. Define endosperm. What are the three types of endoperm formations in plants?
- 24. Explain the different types of vascular arrangements.
- 25. Define tapetum. How is it classified? Mention its function.
- 26. Comment on the role of palynology in taxonomy.
- 27. Compare the leaf anatomy of monocots and dicots.
- 28. What are meristematic tissues? How are they classified?
- 29. What are pits? Describe the two different types of pits present in the cells of plants.
- 30. Give an account on reserve food materials present in plants.
- 31. What are the different types of parenchyma tissues present in plants? Mention their function.

 $(6 \times 4 = 24 \text{ Marks})$ 

#### SECTION – D

Long essay type: Answer any Two questions.

- 32. What are complex tissues? How are they classified?
- 33. Compare anomalous secondary thickening in the stems of *Dracaena* and *Bignonia*.
- 34. Describe secondary thickening in dicot root. Explain how the periderm formation in roots differ from that of a dicot stem?
- 35. Describe megasporogenesis and explain the development of a typical monosporic embryosac.

 $(2 \times 15 = 30 \text{ Marks})$