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MAR IVANIOS COLLEGE (AUTONOMOUS) THIRUVANANTHAPURAM

Reg. No. :	Name :
First Semester B.Sc. Degree	Examination, November 2014
First Degree Progr	amme under CBCSS
Complementary Course	: Botany – I (for Zoology)
AUBO131: Microtechnique, Angiospe	erm Anatomy and Reproductive Botany
Time: 3 Hours	Max. Marks: 80

SECTION - A

Write short notes on ALL the following.

- 1. Medullary ray.
- 2. Collenchyma.
- 3. Microsporogenesis.
- 4. Double staining.
- 5. Antipodal cell.
- 6. Mordant.
- 7. Subsidiary cell.
- 8. Polyembryony.
- 9. Sap wood.
- 10. Double fertilization.

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

SECTION - B

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

- 11. Differentiate Ring Porous wood from Diffuse Porous wood.
- 12. Distinguish between a Bicollateral and Collateral Vascular bundle.
- 13. Bring out the structure and a function of a Guard cell.
- 14. What is Casparian strip? Mention its functions.

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- 15. Discuss the role of Quiscent centre.
- 16. Explain Parthenocarpy.
- 17. Elucidate the structure of water stomata.
- 18. Define a closed vascular bundle with an example.
- 19. Mention the significance of annual rings.
- 20. Distinguish between Periblem and Periderm.
- 21. Explain Nucellus.
- 22. Illustrate and explain the structure of a pollen grain.

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

SECTION - C

Short essay type: Answer any **SIX** questions.

- 23. What are Sclereids? Explain any three types of Sclereids.
- 24. Explain with illustration the structure of a mature monosporic Embryo sac.
- 25. Elucidate the function of procambium. What are its derivatives?
- 26. Bring out the difference between tissue and tissue system.
- 27. What are companion cells? Distinguish them from complementary cells.
- 28. Explain natural stains with examples.
- 29. Explain Tunica corpus theory.
- 30. Discuss Laticifers.
- 31. Briefly explain killing and fixing in Microtechnique.

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

SECTION - D

Long essay type: Answer any **TWO** questions.

- 32. Explain the primary structure of a Dicot stem and bring out its normal secondary thickening.
- 33. Illustrate the cross section of a Mature anther and write a note on structure and function of wall layers.
- 34. Elucidate the structure of tracheary elements.
- 35. Compare the internal structure of a Dicot leaf with that of a Monocot leaf.

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