



MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No. :.....

Name :.....

First Semester B.Sc. Degree Examination, November 2016

First Degree Programme under CBCSS

Complementary Course: Botany – I (for Zoology)

AUBO131.2e: Microtechnique, Angiosperm Anatomy and Reproductive Botany

(Common for **Regular** – 2016 Admn. and **Improvement** – 2015 Admn.)

Time: 3 Hours

Max. Marks: 80

SECTION – A

Write short notes on ALL the following.

1. Cambium
2. Carnoy's fluid
3. Synergids
4. Sclereids
5. Protoxylem lacuna
6. Ornithophily
7. Porogamy
8. Scutellum
9. Obturator
10. Ambhivasal vascular bundle.

(10 × 1 = 10 Marks)

SECTION – B

Answer any EIGHT questions, not exceeding one paragraph.

11. Draw a labeled diagram of monocot leaf.
12. Give characteristics of insect pollinated flower.
13. Explain Histogen theory.
14. Define triple fusion. What does the product develop into ?

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15. Differentiate fascicular cambium from inter fascicular cambium.
16. Define heart wood and sap wood.
17. What is Pericycle ?
18. What is egg apparatus ?
19. What is killing and fixing ?
20. How will you identify dicot root from monocot root based on stellar anatomy ?
21. Structure of stomata in dicot and monocot leaf.
22. What is Tyloses ?

(8 × 2 = 16 Marks)

SECTION – C

Short essay type : Answer any SIX questions.

23. With diagram describe the structure and development of male gametophyte.
24. Compare vascular cambium and cork cambium.
25. Explain the structure and functions of the wall layers of anther.
26. Write a brief note on stains.
27. Explain periderm formation in dicot stem.
28. Write a short note on i) bark ii) cork iii) Lenticel
29. Describe different types of vascular bundles.
30. Give an account of tapetum.
31. What are three types of endosperm formation found in plants ? Give an example of liquid endosperm.

(6 × 4 = 24 Marks)

SECTION – D

Long essay type : Answer any TWO questions.

32. Describe megasporogenesis and the development of embryo sacs in angiosperm.
33. Define the term meristem. Explain and classify different types of meristematic tissues.
34. With suitable diagram describe the normal type of secondary growth in Dicot stem.
35. Describe the abnormal secondary growth in *Boerhavia* stem and compare it with a normal Dicot stem you have studied.

(2 × 15 = 30 Marks)

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