MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No. :…… **Name :……**

Third Semester Career Related B.Sc. Degree Examination, November 2016

First Degree Programme under CBCSS

Core Course – III: (for Botany and Biotechnology)

AUBB341: Angiosperm Anatomy and Reproductive Botany

(*for 2014 Admissions – **Improvement** Only*)

Time: **3** Hours Max. Marks : **80**

SECTION – A

*Answer **ALL t**he following each in a word or as short notes.*

1. What is a leaf trace ?
2. What is pollinium ?
3. Calcium and magnesium pectate are mainly present in which region of the plant cell wall ?
4. Which structure is considered as the megasporangium in angiosperms ?
5. Name the cytoplasmic connections between adjacent cells.
6. Mention the ploidy level of angiosperm endosperm ?
7. Cite an example for secondary meristem.
8. Define melittopalynology.
9. Differentiate between endarch and exarch xylem.
10. Companion cells are seen in which tissue ?

(10 × 1 = 10 Marks)

SECTION – B

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

11. What are secretory tissues ? Cite an example.
12. Write a note on any two nonliving inclusions in a plant cell.
13. Differentiate between fascicular and interfascicular cambiums.

14. What is a simple tissue ? Mention two examples.
15. Which are the different layers of periderm? Name the periderm layer which is meristemsatic.
16. Enumerate the major differences between ring porous and diffuse porous woods.
17. Explain the reason for the formation of annual rings.
18. Write a note on the structure of the wall of angiosperm anther.
19. What is triple fusion ? Why it is called so ?
20. Highlight the applications of palynology.
21. Differentiate between porogamy and chalazogamy.
22. What are lenticels ? Explain their function.

(8 × 2 = 16 Marks)

SECTION – C

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

23. Write a note on the structure of angiosperm pollen
24. Explain the process of microsporogenesis in angiosperms.
25. Differentiate between the primary structure of monocot and dicot roots.
26. With the help of suitable diagrams explain the various components of xylem tissue.
27. Elaborate on 'Tunica Corpus theroy'
28. What are tyloses ? How they are formed ?
29. With the help of labeled diagrams explain the various types of vascular bundles seen in plants.
30. Explain the development of nuclear endosperm. How it differs from the formation of cellular endosperm ?
31. With the help of a labeled diagram explain the structure of a dorsiventral leaf.

(6 × 4 = 24 Marks)

SECTION – D

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

32. With the help of a labeled diagram explain the primary structure of a typical dicot stem. How it differs from that of a monocot stem ?
33. Explain the process of secondary thickening in *Bignonia* stem.
34. Describe the *Polygonum* type of embryo sac development.
35. Write notes on cell wall thickening. Explain the structure of simple and bordered pits.

(2 × 15 = 30 Marks)

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