MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No.:…… **Name:...……**

Fourth Semester B.Sc. Degree Examination, June 2016
First Degree Programme under CBCSS
Core Course: Botany – III
AUBO441: Bryology, Pteridology, Gymnosperms and Palaeobotany

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

SECTION – A

*Answer **ALL** questions in one or two sentences.*

1. Resurrection plants.
2. Dwarf shoot.
3. Rhizoids in Riccia.
4. Cleavage polyembryony.
5. Transfusion tissue.
6. Synangium.
7. Define heterospory.
8. Why bryophytes are considered as amphibians in the plant kingdom ?
9. What are elators ?
10. Fossil Gymnosperm.

(10 × 1 = 10 Marks)

SECTION – B

*Answer any **EIGHT** questions, each in a short paragraph not exceeding 50 words.*

11. Enumerate the economic importance of bryophytes.
12. Give the morphology of rhizophore in Selaginella.
13. Describe the capsule of Funaria.
14. Describe the structure of coralloid root of Cycas.

15. Explain thallus anatomy of Riccia.
16. Describe girdling leaf traces of Cycas.
17. Explain the stem anatomy of Rhynia.
18. Explain manoxylic wood.
19. Describe the structure of female cone in Pinus.
20. What are fossils ? Mention theories involved in fossilisation of plants.
21. Describe Marselia sporocarp.
22. Endodermis in Selaginella.

(8 × 2 = 16 Marks)

SECTION – C

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

23. Explain the structure of Pinus needle and mention its xerophytic adaptations.
24. Explain the structure and dehiscence of Marchantia capsule.
25. With the help of suitable diagrams, bring out the structure of sporocarp of Marselia.
26. Enumerate the structure of Pteris petiole.
27. Describe the male inflorescence (staminate strobilus) of Gnetum.
28. With the help of a diagram, explain the structure of antheridial branch of Funaria.
29. Describe the structure of Cycas ovule.
30. Write note on Lepidocarpon and Lepidodendron.
31. Explain the stele in Marselia rhizome with labelled diagram.

(6 × 4 = 24 Marks)

SECTION – D

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

32. Write an essay on the reproductive cycle in Selaginella.
33. Give an account of the male and female gametophytes of Gnetum and comment on their resemblance to Angiosperms.
34. Describe the internal structure of thallus, reproduction and life cycle of Marchantia.
35. Describe with illustrations the stelar evolution in Pteridophytes.

(2 × 15 = 30 Marks)

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