

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2004-05 & thereafter)

SUBJECT CODE: BT/MC/BP24

B.Sc. DEGREE EXAMINATION, APRIL 2007
BRANCH V(A) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
SECOND SEMESTER

COURSE : MAJOR – CORE
PAPER : BRYOPHYTA, PTERIDOPHYTA AND GYMNOSPERMS
TIME : 3 HOURS MAX. MARKS: 100

SECTION –A

ANSWER ALL QUESTIONS:

I Choose the correct answer: (7 MARKS)

1. Amphigastria are seen in
a) Porella b) Lycopodium c) Selaginella d) Cycas
2. The plant body of Bryophytes is called
a) Sporophyte b) Strobilus c) Gametophyte d) Rhizome
3. Which of these is homosporous?
a) Selaginella b) Lycopodium c) Cycas d) Marsilea
4. Excentric cambial rings are seen in
a) Cycas b) Gnetum c) Marsilea d) Polytrichum
5. Transfusion tissue is seen in
a) Cycas rachis b) Cycas leaflet c) Gnetum root d) Gnetum stem
6. Marsilea is commonly called
a) Club moss b) Horsetail c) Horn wort d) Water fern
7. The “Age of Cycads’ is
a) Coenozoic era b) Mesozoic era c) Paleozoic era d) Proterozoic era

II Fill in the blanks: (5 MARKS)

8. The common name club moss refers to _____.
9. The amphibians of the plant kingdom are _____.
10. The stem of Cycas shows leaf traces called _____.
11. Lepidocarpon is an example for a fossil _____.
12. Pavement tissue is seen in _____.

III Say whether True or False:**(6 MARKS)**

13. Pseudo elaters are seen in Porella.
14. Leptom is seen in Polytrichum
15. Ligule is present in Lycopodium
16. Petrifications preserve both external form and internal structure.
17. Diploxylic condition is seen in Gnetum
18. Marsilea is a heterosporous fern.

IV Answer any six of the following.**(6 x 3 = 18)**

- 19 Ligule
- 20 Pavement tissue
- 21 Corolloid root of Cycas
- 22 Amphiphloic siphonostele
- 23 Rhizophore
- 24 Columella
- 25 Coenozoic era
- 26 Elaters
- 27 Lepidostrobos

SECTION – B**ANSWER ANY FOUR OF THE FOLLOWING:****(4 x 6 = 24)**

28. Describe the gametophyte of Porella.
29. Describe the fossil genus Lepidodendron
30. Describe the capsule of Polytrichum
31. Give an outline of the Reimer's classification of Pteridophytes.
32. Describe the sporophyte of Selaginella.
33. Describe the internal structure of Cycas leaflet.

SECTION – C**(2 x 20 = 40)****ANSWER ANY TWO OF THE FOLLOWING:**

34. Describe the life cycle of Anthoceros.
35. Describe the sporophyte of Marsilea
36. Compare and contrast the male cones of Cycas and Gnetum. Add a note on the salient features of Gymnosperms.
37. Give an outline of the geological time scale. Write on the compressions, casts and petrifications.

▲▲▲▲▲▲▲▲