STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2015 – 2016)

SUBJECT CODE: 15BT/MC/BP24

B.Sc. DEGREE EXAMINATION, APRIL 2016
BRANCH V(A) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
SECOND SEMESTER

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

SECTION –A

ANSWER ALL QUESTIONS:

I Choose the correct answer: (5 x 1 = 5)

1. The leaves in *Porella* are arranged in _____.
   a. single row b. two rows c. three rows
2. Erect gametophore is present in_____.
   a.Hepaticopsida b. Anthocerotopsida c. Bryopsida
3. Horse tail is the common name of
   a. *Lycopodium* b. *Equisetum* c. *Marsilea*
4. In spite of several angiospermic features *Gnetum* is a gymnosperm because_____.
   a. Seed is naked b. Polyembryonic feature c.Prothallial cell is present
5. Which one of the following is called a living fossil_____?
   a *Gnetum* b. *Ginkgo biloba* c. *Taxus*

II Fill in the blanks: (5 x 1 = 5)

6. A stele without pith is called_____.
7. The function of transfusion tissue in *Cycas* is_____.
8. *Anthoceros* is commonly known as_____.
9. Root fossils of the *lepidodendron* are known as_____.
10. In *Polytrichum*, spore liberation is regulated by_____.

III State whether the following sentences are True or False (4 x 1 = 4)

11. Perichaetial leaves are present in *Porella.*
12. All the gymnosperms are heterosporous.
13. Sahani reconstructed Williamsonia from Jurassic period of upper Gondwana.
14. Most primitive vascular plants are cycads.

IV Match the following: **(4 x 1 = 4)**

15. Jurassic a. Pteridophytes
16. Proskauer b. Bryophytes
17. Reimer c. Algae
18. Cambrian d. Conifers

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V. Answer any SIX of the following. (6 x 3 = 18)
Each answer not to exceed 50 words:

19. Liverworts
20. Zygote
21. Rhizoids
22. Elaters
23. Alternation of generation
24. Gemmae
25. Apospory
26. Sori
27. Monoecious

SECTION – B (4 x 6 = 24)

ANSWER ANY FOUR OF THE FOLLOWING IN NOT MORE THAN 200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY.

28. List out the characteristic features of Hepaticopsida.
29. Describe the strobilus of *Equisetum.*
30. Write the differences between Bryophytes and Pteridophytes.
31. Describe the internal structure of the thallus of *Anthoceros.*
32. Write short notes on coralloid root of *Cycas.*
33. Write short notes on Lepidodendron.

SECTION – C (2 x 20 = 40)

ANSWER ANY TWO OF THE FOLLOWING IN NOT MORE THAN 1000 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY.

34. Describe the structure of the sporogonium of *Polytrichum.*
35. Describe the internal structure of the sporocarp of *Marsilea.*
36. Give an account of the life cycle of *Gnetum.*
37. Write an essay on the types of fossilization.

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