

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY & PLANT BIO-TECH.

SECOND SEMESTER – APRIL 2010

PB 2504/PB 2502/2500 - PLANT DIVERSITY - II (PTERI.,GYMNO.,& PALEOBOT.)

Date & Time: 20/04/2010 / 1:00 - 4:00 Dept. No.

Max. : 100 Marks

PART – A (20 MARKS)

I. CHOOSE THE CORRECT ANSWER

(5 x 1 = 5)

1. The leaves of *Lycopodium* are
a) Scales b) Microphylls c) Sporophylls d) Protophylls
2. Bars of Sario are present around
a) Bordered pits b) Resin Canal c) Tracheid d) Sieve Tube
3. The characteristic feature present at the base of internode of *Equisetum* is
a) Vallecular canal b) 'V' shaped xylem c) Carinal canal d) Intercalary meristem
4. Which one of the following posses green or blue green or red coloured leaves ?
a) *Lycopodium* b) *Azolla* c) *Gnetum* d) *Marsilea*
5. *Calamites* was predominant during the period....
a) Carboniferous b) Lower Jurassic c) Middle Devonian d) Permian

II. STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE

(5 x 1 = 5)

6. The ovule of *Cycas* is not orthotropous.
7. Elaters are found in *Equisetum*.
8. *Gnetum ula* is not a tree.
9. Pinnule of *Adiantum* forms the indusium.
10. *Lepidodendron* is a coal fossil.

III. COMPLETE THE FOLLOWING

(5 x 1 = 5)

11. The germination of seed is..... in *Gnetum*.
12. The apogeotropic root of *Cycas* is
13. The development of sporangium in *Psilotum* is..... type.
14. The hooked processes of massulae are
15. *Rhynia* was discovered from

(P.T.O.)

IV. ANSWER ALL THE QUESTIONS, EACH WITHIN 50 WORDS ONLY

(5 x 1 = 5)

16. What is manoxylic wood?
17. What is a sporocarp?
18. What is syndetocheilic structure?
19. What is girdle leaf trace?
20. What is cast?

PART – B

ANSWER THE FOLLOWING, EACH ANSWER WITHIN 500 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY.

(5 x 7 = 35 marks)

21. (a) Outline the classification of Pteridophytes.
(or)
(b) Differentiate Leptosporangiate and Eusporangiate ferns.
22. (a) Compare the cones of *Lycopodium* and *Equisetum*.
(or)
(b) Explain the spore producing structure in *Adiantum*
23. (a) What are the general characters of gymnosperms ?
(or)
(b) Explain the anatomy of needle of *Pinus*.
24. (a) Describe the structure of T.S of rhizome of *Marsilea*.
(or)
(b) Explain the structure of ovule of *Cycas* and *Gnetum*.
25. (a) Write notes on geological time scale.
(or)
(b) Explain the sporophyte of *Rhynia*.

PART – C

ANSWER ANY THREE QUESTIONS, EACH WITHIN 1200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY

(3 x 15 = 45 marks)

26. What is heterospory? Does it lead to the formation of seed habit?
27. Explain the life cycle of *Psilotum*.
28. Write an essay on the economic importance of gymnosperms.
29. Explain the different types of fossilization.
30. Explain with diagrams the angiospermic characters of *Gnetum*.

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