



Date: 02-04-2019

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

PART- A

Answer the following, each within 50 words.

(10 x 2=20marks)

1. What is leptosporangiate?
2. What is amphiphloic siphonostele?
3. Comment on the sporocarp of *Marsilea*.
4. What is maiden hair fern?
5. Define sporophytic generation.
6. What is an indusium?
7. Highlight the male sporophyll of *Cycas*.
8. What is a conifer?
9. Mention any two fossils embedded in amber.
10. What are casts and moulds?

PART- B

Answer the following, each within 500 words. Draw diagrams wherever necessary.

(5 x 7=35 marks)

11. (a) Distinguish between apospory and apogamy.

OR

- (b) Outline the concept of heterospory.

12. (a) Explain the structure of synangium of *Psilotum*.

OR

- (b) Elaborate on the economic importance of ferns.

13. (a) Describe the salient features of Bennettitales.

OR

(b) Explain the concept of pro-gymnosperms.

14. (a) Describe the coralloid root of *Cycas*.

OR

(b) Describe the anatomy of *Pinus* needle.

15. (a) What is radio carbon dating? Add notes on geological time scale.

OR

(b) Give an account on any three types of fossils.

PART- C

Answer **any three** of the following, each within 1200 words. Draw diagrams wherever necessary.
(3 x 15=45 marks)

16. Explain the various types of stelar system in Pteridophytes.

17. Write notes on the morphology and anatomy of root, stem and strobilus of *Equisetum*.

18. Describe the reproductive structures of *Gnetum*.

19. Illustrate and explain the reproductive structures of *Pinus*.

20. Explain the reconstruction of *Rhynia* and *Calamites*.

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