

**PART C — (5 × 8= 40 marks)**

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write notes on classification of pteridophytes.  
Or  
(b) Describe the life cycle of Lycopodium.
17. (a) Write an essay on Adiantum life cycle.  
Or  
(b) Explain the internal structure of marsilea sporocarp.
18. (a) Explain the life cycle of Pinus.  
Or  
(b) Write an notes on male or female cone of pinus.
19. (a) Explain the male, female cones of Gnetum.  
Or  
(b) Describe the life history of Gnetum.
20. (a) Write an essay on Geological time scale.  
Or  
(b) Give an account on sporophyte generation of Rhynia.

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**Code No. : 10818 E Sub. Code : SMBO 31**

**B.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.**

**Third Semester**

**Botany — Main**

**PTERIDOPHYTES, GYMNOSPERMS AND  
PALEOBOTANY**

**(For those who joined in July 2017 onwards)**

**Time : Three hours**

**Maximum : 75 marks**

**PART A — (10 × 1 = 10 marks)**

**Answer ALL questions.**

**Choose the correct answer.**

1. Fern gametophyte is \_\_\_\_\_  
(a) Homothallic (b) Heterothallic  
(c) Heteroecious (d) None of these
2. Lycopodium is commonly know as  
(a) Whisk fern (b) Club moss  
(c) Maiden hair (d) Water fern



3. Adiantum spores are seen in \_\_\_\_\_  
 (a) Cone (b) Sori  
 (c) Sporocarp (d) None of these
4. Marsilea is commonly called is \_\_\_\_\_  
 (a) Whisk fern (b) Club moss  
 (c) Maiden hair (d) Water fern
5. Arm parenchyma is found in  
 (a) Stem (b) Needle  
 (c) Root (d) Cone
6. The ovuliferous scale of pinus is a part of \_\_\_\_\_  
 (a) Megasporophyll (b) Microsporophyll  
 (c) Ovule (d) Dwarf shoot
7. Anomalous secondary growth are seen in \_\_\_\_\_  
 (a) Gnetum Ula (b) G.Gnemon  
 (c) G.Latifolium (d) G.Montanum
8. Gnetum female gametophyte is \_\_\_\_\_  
 (a) Exosporic (b) Endosporic  
 (c) Bisporic (d) Tetrasporic
9. Paleobotany is a branch of botany which deals with  
 (a) Living plant (b) Fossil plant  
 (c) Rare plant (d) None of these

Page 2 Code No. : 10818 E

10. Rhynia is a fossil \_\_\_\_\_  
 (a) Pteridophyte (b) Bryophyte  
 (c) Gymnosperm (d) Angiosperm

**PART B — (5 × 5 = 25 marks)**

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Enumerate the general characters of pteridophytes.  
 Or  
 (b) Describe the structure of cone of Lycopodium.
12. (a) Write short notes on Adiantum sporangium.  
 Or  
 (b) Describe the internal structure of marsilea petiole.
13. (a) Give account on morphology of pinus.  
 Or  
 (b) Describe the internal structure of pinus needle.
14. (a) Write notes on primary growth in Gnetum stem.  
 Or  
 (b) Describe the internal structure of Gnetum leaf.
15. (a) What do you understand from fossils?  
 Or  
 (b) Write notes on internal structure of Lepidodendran stem.

Page 3 Code No. : 10818 E

