

(6 Pages)

Reg. No. : .....

Code No. : 10738 E      Sub. Code : AMBO 41

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2022

Fourth Semester

Botany — Core

PTERIDOPHYTES, GYMNOSPERMS AND  
PALEOBOTANY

(For those who joined in July 2020 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Most primitive living vascular plants are  
(a) Bryophytes                      (b) Pteridophytes  
(c) Gymnosperms                  (d) Angiosperms
2. Seed habit originated in  
(a) Algae                              (b) Fungi  
(c) Pteridophytes                  (d) Bryophytes

3. Which one is commonly known as walking fern?

- (a) *Adiantum*                      (b) *Selaginella*  
(c) *Lycopodium*                  (d) *Psilotum*

4. The first land inhabitant plants are

- (a) Bryophytes                      (b) Pteridophytes  
(c) Gymnosperms                  (d) Angiosperms

5. Xylem vessels are absent in

- (a) Algae                              (b) Fungi  
(c) Gymnosperms                  (d) Angiosperms

6. Roots of *Pinus* seedlings are associated with

- (a) Bacteria                          (b) Viruses  
(c) Algae                              (d) Fungi

7. Smallest gymnosperm is

- (a) *Sellaginella*                      (b) *Cycas*  
(c) *Zamia*                              (d) *Genetun*

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8. Paper is obtained from

- (a) *Pinus* (b) *Picea*  
(c) *Larix* (d) All the above

9. Fossils are found in —————

- (a) Igneous rocks (b) Quartz  
(c) Soil (d) Sedimentary rocks

10. Which one is a extinct vascular cryptogam?

- (a) *Rhynia* (b) *Psilotum*  
(c) *Gnetum* (d) *Pinus*

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) Illustrate the synangium of *Psilotum*.

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12. (a) Give an account on *Selaginella*.

Or

(b) Write a short note on reproduction takes place in *Adiantum*.

13. (a) Illustrate the internal structure of *Pinus* root.

Or

(b) List out the general characteristics of Gymnosperms.

14. (a) Explain the systematic position and various species of *Gnetum*.

Or

(b) Explain the brief about internal structure of *Gnetum* stem.

15. (a) Write short notes on applications of fossil study in Botany.

Or

(b) Draw and describe the structure of young stem of *Lyginopteris*.

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PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Describe Sporne classification of Pteridophytes.

Or

- (b) Explain the detailed notes on reproduction of *Lycopodium*.

17. (a) Write an essay on Stelar evolution in Pteridophytes.

Or

- (b) Illustrate the life cycle of *Selaginella* with suitable diagram.

18. (a) Write the outline of Gymnosperm classification.

Or

- (b) Write an essay on the male and female cones of *Pinus*.

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19. (a) *Gnetum* is considered as an advanced genus of gymnosperms – justify.

Or

- (b) List out the economic importance of Gymnosperms.

20. (a) Write down the glimpses of geological time scale.

Or

- (b) Define fossil. Describe the conditions favoring fossilization.

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