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**AC-234413**

**M.Sc. (Semester-I)  
Examination, Dec.-Jan., (2025-26)**

**BOTANY**

**( Bryophytes and Pteridophytes )**

*Time Allowed : Three Hours*

*Maximum Marks : 70*

**Note :** This question paper is divided into four sections. Attempt questions of all four sections as per direction. Distribution of marks is given in each section.

**SECTION-A**

**( Objective Type Questions )**

**Note :** Attempt any ten questions. Each question carries 1 mark. [10×1=10]

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**[P.T.O.]**



1. (i) Vegetative propagation by gemmae takes place in :

- (a) Riccia
- (b) Marchantia
- (c) Ectocarpus
- (d) Chara

(ii) The collumella of the sporophyte of Anthoceros is formed from :

- (a) Amphithecium
- (b) Endothecium
- (c) Both (a) and (b)
- (d) None of these

(iii) Psilotum is commonly known as :

- (a) Horse tail
- (b) Club moss
- (c) Whisk fern
- (d) Liver wort

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(iv) Nostoc is found in the mucilage cavity of :

- (a) Riccia
- (b) Anthoceros
- (c) Pellia
- (d) Marchantia

(v) Which of the following is an aquatic pteridophyte?

- (a) Lycopodium
- (b) Equisetum
- (c) Azolla
- (d) Pteris

(vi) Coal fields are mostly made by the fossilisation of :

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

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[P.T.O.]



(vii) Which is "Royal Fern"?

- (a) Osmunda
- (b) Gleichenia
- (c) Cyathea
- (d) Ophioglossum

(viii) Dictyostelic Stele is found in :

- (a) Lycopodium
- (b) Marsilea
- (c) Pteris
- (d) Equisetum

(ix) The simplest stele is called :

- (a) Protostele
- (b) Siphonostele
- (c) Solenostele
- (d) Dictyostele

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(x) Heterospory is supposed to be evolved from :

- (a) Homospory
- (b) Seed habit
- (c) Seed
- (d) None of these

(xi) Which of the following posses clear cut heterospory?

- (a) Selaginella
- (b) Equisetum
- (c) Cycas
- (d) Lycopodium

(xii) Integumented megasporangium is called :

- (a) Nucellus
- (b) Megasporophyll
- (c) Seed
- (d) Seed Coat

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[P.T.O.]



## SECTION-B

### ( Very Short Answer Type Questions )

**Note :** Attempt any five questions. Each question carries 02 marks. (Word limit 25-30 words) [5×2=10]

2. (i) Define the Homospory.
- (ii) Write about the thallus.
- (iii) Define the Apogamy and Apospory.
- (iv) Write about the liver worts.
- (v) What is Stele?
- (vi) Rhizoids and Scales
- (vii) Origin of seed habit

## SECTION-C

### ( Short Answer Type Questions )

**Note :** Attempt any five questions. Each question carries 04 marks. (Word limit 250 words) [5×4=20]

3. (i) Write about the sporophyte in Bryopsida.

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- (ii) Write about the adaptations in Equisetum.
- (iii) Compare the anatomy of Hepaticopsida and Anthocerotopsida thallus.
- (iv) Stelar System in pteridophytes.
- (v) Characteristic Features of Bryophyta.
- (vi) Classification of Bryophytes.
- (vii) Economic importance of pteridophytes.

## SECTION-D

### ( Long Answer Type Questions )

**Note :** Attempt any three questions. Each question carries 10 marks. (Word limit 500 words) [3×10=30]

4. (i) Describe comparative account of gametophytes of Bryophyta.
- (ii) Compare the anatomy of Lycopsida, and sphenopsida sporophytes.
- (iii) Explain the process of sterilization of sporogenous tissue in bryophytes with example.

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[P.T.O.]



- (iv) Describe the evolution of pteridophytes. Discuss pteridophytes phylogenetic theories.

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