



## **ED-317**

M.Sc. 1st Semester  
Examination, March-April 2021

### **BOTANY**

Paper - IV

Bryophyta, Pteridophyta and Gymnosperms

*Time* : Three Hours] [Maximum Marks : 80

[Minimum Pass Marks : 16

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**Note** : Answer **all** questions. All questions carry equal marks.

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#### **Unit-I**

1. Give a comparative account of the sporophytes of Marchantia, Anthoceros and Funaria.

**OR**

Write notes on the any **two** of the following :

- (a) Vegetative reproduction in Bryophytes
- (b) Spore dispersal mechanism in Bryophytes
- (c) Sporophyte of Polytrichum

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(Turn Over)

( 2 )

**Unit-II**

2. What are Stele ? Describe the evolution of stele in Pteridophytes ?

**OR**

Write notes on any **two** of the following :

- (a) Concept of first vascular plants
- (b) Structure of mature archegonium of psilotum
- (c) Prothallus organization in pteridophytes

**Unit-III**

3. Gymnosperms are a connecting link between angiosperm and pteridophytes ? Explain it.

**OR**

Write notes on any **two** of the following :

- (a) Distribution of Gymnosperm in India
- (b) Classification of Gymnosperm
- (c) Endosperm in Gymnosperm

**Unit-IV**

4. Give an account on the affinities of Gnetum and show how it is closely related to Angiosperm.

**OR**

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Write notes on any **two** of the following :

- (a) Account of Glossopteris
  - (b) Female cone of Pinus
  - (c) Male strobillus of Welwitschia
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