



**LJ-514**

**M.Sc. Botany**

1st Semester Examination, July-Dec., 2020

Paper - IV

Bryophyta, Pteridophyta and Gymnosperm

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

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**Note** : Answer from **all** the Units and Question Number 1 is compulsory. The figures in the right-hand margin indicate marks.

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1. Write short notes on any **four** of the following : 20
- (a) Describe the morphology and Anatomy of Anthocerotales Sporophytes
  - (b) Stellar organization in pteridophytes
  - (c) Gymnosperms distribution in India
  - (d) General account of fossil pteridophytes
  - (e) Write general account of Ginkgoales

(2)

**Unit-I**

2. Write economic and ecological importance of Bryophyta plant group. 15

**OR**

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

- (a) Vegetative Reproduction in Bryophytes Plants
- (b) General account of marchantiales
- (c) Classification of Bryophyta

**Unit-II**

3. Write the difference between Homospory and Heterospory in pteridophytes. 15

**OR**

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

- (a) Origin of seed habit in pteridophyta
- (b) Describe characteristic feature of Lycopsidea
- (c) Describe the morphology and nature of sporocarp

(3)

**Unit-III**

4. Write resemblance and difference between Gymnosperm and Angiosperm. 15

**OR**

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

- (a) Classification of Gymnosperms
- (b) Economic importance of Gymnosperms
- (c) Structure and theories regarding origin of paleozoic ovule

**Unit-IV**

5. Give general account of order pteridospermales. 15

**OR**

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

- (a) Caytoniales
- (b) Gnetales
- (c) Cycadales