

B.Sc. 3rd Semester, (New Scheme)

Examination, November-2017

Biotechnology

Paper-BT-304

PLANT DIVERSITY-II

*Time allowed : 3 hours]*

*[Maximum marks : 40*

*Note: Attempt five questions in all. Question No. 1 is Compulsory and attempt remaining other fours selecting at least one from each unit.*

**Compulsory Question**

- 1/ Answer the following questions in brief: 2 x 5
- (1) What are the general characteristic features of gymnosperms?
  - (2) Give economic importance of Pinus?
  - (3) Briefly explain 'heterospory and seed habit'?
  - (4) Explain the terms: Telome
  - (5) Similarities and dissimilarities between pteridophyta and bryophytes

**Unit-I**

- 2/ Give general characteristics of pteridophytes along with their affinities with gymnosperms. 7½
3. Write short notes on: 7½
- (1) Life cycle of Rhynia.
  - (2) Economic importance of pteridophytes

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**Unit-II**

4. What is heterospory? Give it biological importance. 7½
- 5✓ Give a comprehensive account of life cycle of Equisetum. 7½

**Unit-III**

6. Give an outline of classification of the Gymnosperms along with characteristic features of each group. 7½
- 7✓ Briefly explain 'Stele concept' and add a note on evolution of the stellar system. 7½

**Unit-IV**

- 8✓ Give a diagrammatic representation of Cycas life cycle and briefly explain it. 7½
9. Write short notes on any two: 7½
- (1) Cycas is a living fossil.
  - (2) Cones in Pinus
  - (3) Economic importance of Gymnosperms