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**PG (NEW) CBCS**  
**M.Sc. Semester-I Examination, 2018**  
**BOTANY**  
**PAPER: BOT-104**  
**(PTERIDOPHYTES & GYMNOSPERMS)**

**Full Marks: 40****Time: 2 Hours**

**Write the answer for each unit in separate sheet**

UNIT I:

**PTERIDOPHYTES**

1. **Answer any two questions of the following:** 2×2=4
  - a) How does zosterophyllopsida differ from Rhyniopsida?
  - b) Describe the evolution of microsporophyllous leaf from non-vascularized enations.
  - c) Mention eusporangiate and leptosporangiate with example.
  - d) What is meant by acrostichoid condition of a sorus? Cite an example.
  
2. **Answer any two questions form the following:** 4×2=8
  - a) Economic importance of pteridophytes.
  - b) Lepidocarpon: a false seed.
  - c) Telome theory.
  - d) Apospory in pteridophytes.
  
3. **Answer any one question of the following:** 8×1=8
  - a) Characterize the order Filicales. Name two heterosporous genus of filicalian ferns. Illustrate the soral evolution of fern. 2+1+5=8
  - b) What is meant by 'Rhyie Chert'? Write the gametophyte structures of Ryniopsida. Characterize Trimerophytopsida. Why Trimerophytopsida is regarded as the cardinal group in the evolution of higher pteridophytes. 1+2+2+3=8

UNIT II:

**GYMNOSPERMS**

4. **Answer any two questions of the following:** 2×2=4
  - a) What is meant by pre-pollen?
  - b) What is meant by sparganum cortexes? Where does it occur?
  - c) Mention the families of modern conifer.
  - d) What is copal? Write different types of copal with their functions.
  
5. **Answer any two from the following:** 4×2=8
  - a) Gynosperm and human health.
  - b) Cyatonia fruit.
  - c) Leaves of Meduleosaceac.
  - d) Gnetum as a progenitor of angiosperm.
  
6. **Answer any one question of the following:** 8×1=8
  - a) Characterize cycadales. Mention two extant genera of cycadales. Discuss the evolution of megasporophylls among different members of cycadales. 3+1+4=8
  - b) Illustrate different fossil taxa of glossopteris plant. 8

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