

**2016**

**M.Sc.**

**1st Semester Examination**

**BOTANY**

**PAPER—BOT-104**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

**Unit—I**

**( Pteridophytes )**

1. Answer any *four* questions of the following : 1×4
- (a) What is meant by leptosporangiatea ?
  - (b) What is meant by centrarch protostele ?
  - (c) What is bipolar growth habit ?
  - (d) What is meant by coenosorus ?

*(Turn Over)*

- (e) What is meant by overtopping in telome concept ?
- (f) Write down the Geological setting and distribution of the members of Zosterophylloids.
- (g) What is meant by 'acrostichoid sorus' ?
2. Write notes on *two* of the following : 2×4
- (a) *Sciadophyton*.
- (b) Apogamy in pteridophytes.
- (c) Characteristics of Progymnospermopsida.
- (d) *Leclercqia*.
3. Characterize Trimerophyloids. Briefly describe the *Pertica quadrifaria*. Why Trimerophyloids is regarded as the cardinal group in the evolution of pteridophytes of higher scale ? 2+4+2

Or

Characterize Pteropsida. Give a comparative account of reproductive structures between Schizaeaceae, Gleicheniaceae, Cyatheaceae and Polypodiaceae.

2+6

## Unit—II

( *Gymnosperms* )

1. Answer *four* from the following questions : 1×4
  - (a) What is meant by 'sparganum cortex'?
  - (b) Mention two female fructifications of *Glossopteris* plant.
  - (c) What is pre-pollen?
  - (d) Mention the parasitic gymnosperm with its host.
  - (e) Write down the taxon where peltate megasporophyll is found.
  - (f) What is Copal? Mention its source.
  - (g) What is meant by heterospory homoangy?
  
2. Write short notes on any *two* of the following : 2×4
  - (a) Fossil cycads.
  - (b) *Lagenostoma* ovule.
  - (c) *Caytonia* fruit.
  - (d) Economic importance of Gymnosperms.

3. Answer any *one* of the following questions : 1×8
- (a) Characterize coniferales. Mention the families of this order. Briefly describe the global distribution of the members of coniferales. 2+2+4
- (b) Illustrate *Pentoxylon* plant with all its morphotypes. Mention the geological age and distribution of *Pentoxylon*. 6+2
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