

M.Sc. 1st Semester Examination, 2019

BOTANY

PAPER – BOT-104

Full Marks : 40

Time : 2 hours

Answer all questions

The figures in the right hand margin indicate marks

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

Illustrate the answers wherever necessary

Write the answers to questions of each Unit in separate books wherever necessary

UNIT—I

(*Pteridophytes*)

[*Marks : 20*]

1. Answer any *two* questions : 2 × 2
- (a) Give one example each of extant and extinct ligulate lycopods.
 - (b) Name the oldest known free sporing land plant. Mention its geological distribution.
 - (c) Differentiate between Rhyniopsida and Zosterophylloids.
 - (d) What is acrostichoid condition of a sorus ?
Cite example.
2. Write short notes on any *two* of the following : 4 × 2
- (i) Apospory in ferns
 - (ii) Leclercqia
 - (iii) Aneurophytales
 - (iv) Asteroxylon.
3. Answer any *one* of the following : 8 × 1
- (a) What is meant by bipolar growth habit ?
Illustrate the reproductive structures of *Lepidodendron*. What is parichnos. 2 + 5 + 1

- (b) Characterize Filicopsida. Write the major extant clads of the group. Compare between Gleicheniaceae, Schizaeaceae and Cyatheaceae with respect to their reproductive structures.

2 + 2 + 4

UNIT—II

(*Gymnosperms*)

[Marks : 20]

4. Answer any *two* of the following : 2 × 2
- (a) Why Pteridosperms are known as seed ferns ?
 - (b) Characterize corystospermaceous leaf genus.
 - (c) Name one halophytic and parasitic gymnosperm.
 - (d) What is pre-pollen and pre-ovule ?
5. Write short notes on any *two* of the following : 4 × 2
- (i) Leaves of Medullosaceae
 - (ii) Distribution of *conifers* ;

(iii) Gymnosperm as a source of drug and food

(iv) Female cone of *Pentoxylon*.

6. Answer any *one* of the following : 8 × 1

(a) Characterize Cycadales. Name the extant members of the group. Describe the evolutionary trends of megasporophylls among extant Cyadales. 2 + 2 + 4

(b) Illustrate different fossil taxa of *Glossopteris* plant. 8
