

2010

M.Sc.

2nd Semester Examination

BOTANY

PAPER—IX

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.

Write the answers to the questions of each Unit in separate books.

Unit—I

(Pteridophytes)

[Marks—20]

Answer all questions.

1. Answer any *five* of the following : 1×5
- (a) What is massula? Where does it occur?
- (b) What do you mean by 'eusporangiate'?

(Turn Over)

- (c) What is carinal canal ?
- (d) Mention one extinct ligulate pteridophytic taxon.
- (e) What is meant by 'acrostichoid sorus' ?
- (f) What is meant by 'coenosori' ?
- (g) Mention one pteridophytic genus where true marginal sori can be seen.
- (h) How does a progymnosperm differ from a fern ?

2. Write short notes on any *two* of the following : $2\frac{1}{2} \times 2$

- (a) Gametophytes of Rhyniopsida.
- (b) Phyletic slide of a sorus.
- (c) Systematic position of ophioglossales.
- (d) Apospory in Pteridophytes.

3. Answer any *one* question :

(a) Characterise Lepidodendrales. Mention important morphs-anatomical features of lepidodendrids. Write about the reproductive biology of the asborescent lycosids. 3+3+4

(b) Characterize Trimerophytosida. Why is it regarded as the cardinal group in the evolution of pteridophytes of higher scale ? 2+8

Unit—II
(Gymnosperms)

[Marks—20]

Answer all questions.

4. Answer any five of the following : 1×5
- (a) Why pteridosperms are known as seed ferns ?
 - (b) What is meant by manoxylic wood ?
 - (c) What do you mean by mixed protostele ?
 - (d) Mention the female fructification of *Pentoxylon* plant.
 - (e) Mention one gymnospermous taxon that grows in saline water.
 - (f) Why *Ginkgo biloba* is called living fossil ?
 - (g) Write the leaf genera of *Willamsonia Sewardiana*.
 - (h) What is meant by 'hydraspermy' ?
5. Write short notes on any two of the following : $2\frac{1}{2} \times 2$
- (a) Who discovered the group 'progymnospermopsida ?
What is the basis of his discovery ?
 - (b) Salien features of Medullosaceae.
 - (c) Classify modern conifers into families. What are the basis of this classification ?
 - (d) Write about *Caytonia* fruit.

6. Answer any one of the following :

(a) Characterize glossopteridales. Describe in detail about the different form-genera of *Glossopteris* plant which was reconstructed by palaeobotanists.

2+8

(b) In what way gymnosperms differ from angiosperms? Write in detail about the economic importance of gymnosperms.

2+8
