

2009

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 Question 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 do you mean by overtopping?
 - (b) What is evation?

(Turn Over)

- (c) Mention the taxonomic position of cladonylales.
- (d) Name one pteridophyte having latex.
- (e) Write down two heterosporous taxa of Filicales.
- (f) Write about vivipary in pteridophyta.
- (g) Name one first primitive vascular land plant.
2. Write short notes on any *two* of the following : $2\frac{1}{2} \times 2$
- (a) Apogamy in pteridophyta.
- (b) Stellar types in pteridophytes.
- (c) *Baragwanathia* sp.
- (d) Origin of megaphyllous leaf in the light of telome concept.
3. Answer any *one* question :
- (a) Characterise the group Zosterophyllopsida. State its evolutionary significance. 6+4
- (b) Mention the features of seral evolution among ferns. Point out the evolved features of the stellar structures of Pteridophytes. 6+4

Unit—II
(Gymnosperms)

[Marks—20]

Answer all questions.

4. Answer any five of the following : 1×5
- (a) What does it mean by prepollen ?
 - (b) What is Sparganium cortex ?
 - (c) Mention the leaf genera and female fructifications of *crystospermaceae*.
 - (d) What is *Crossotheca* ?
 - (e) What does it mean by haplochetu type of stomata ?
Cite example.
 - (f) Mention the female fructifications of *Glossopteris* plant.
 - (g) Define Gondwana.
5. Write short notes on any two of the following : $2\frac{1}{2} \times 2$
- (a) Evolutionary trends in pollen organs of *Medullosaceae*.
 - (b) Evolutionary features of *Gnetales*.
 - (c) Salient features and male fructifications of *Bennettiales*.
 - (d) *Lagenostoma ovule*.

6. Answer any one of the following :

(a) Illustrate the *Pentoxylon* plant which was reconstructed by the palaeobotanists. Point out its evolutionary trends.

8+2

(b) What is progymnosperm? Why is this group considered as a progenitor of gymnosperms? Discuss.

3+7
