

2015

M.Sc.

2nd Semester Examination

BOTANY

PAPER—BOT-203

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)

[Marks—20]

Answer all questions.

1. Answer any *five* of the following : 1×5
- (a) What is 'centrarch protostele'?
 - (b) Mention one pteridophyte which produces latex.
 - (c) What is meant by acrostichoid sorus?

(Turn Over)

- (d) Name one pteridophyte showing apical annulus.
- (e) What is meant by 'apogony'?
- (f) Write two characters on the basis of which zosterophylloids differ from Rhyniopsida.
- (g) How does a monolete spore differ from a monolete pollen grain?
- (h) What is meant by 'eusporangiate'?

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

- (a) Antithetic theory of alternation of generation.
- (b) *Asteroxylon*.
- (c) Apogamy.
- (d) *Pertica quadrifaria*.

3. Answer any one of the following : 1×10

- (a) Characterize Lepidodendrales. Write some important morpho-anatomical characters of *Lepidodendron*. Discuss about the reproductive structures of Lepidodendroids. 3+3+4
- (b) Characterize pteropsida. Give a comparative account between Schizaeaceae, Gleicheniaceae, Cyatheaceae and Polypodiaceae on the basis of soral characters. 3+7

Unit—II
(Gymnosperms)
[Marks—20]

Answer all questions.

4. Answer any five of the following : . 1×5
- (a) What is taxol ?
 - (b) Distinguish between a detached leaflet of *Sagenopteris* and *Glosopteris* leaf.
 - (c) Write the name of a parasitic gymnosperm.
 - (d) What is meant by Copal ?
 - (e) What is 'Sparganum Cortex' ?
 - (f) Mention the leaf genera of Callistophytaceae.
 - (g) Write the names of male and female fructifications of corystospermaceae.
 - (h) Mention two extant genera of cycads.
5. Write short notes on any two of the following : $2\frac{1}{2} \times 2$
- (a) *Caytonia* fruit.
 - (b) Leaf genera of Williamsoniaceae.
 - (c) Discovery of progymnosperms.
 - (d) *Lagenostoma* ovule.

6. Answer any one of the following :

1×10

(a) Describe the *Pentoxylon* plant with suitable diagrams.
Write the evolutionary significance of the plant.

8+2

(b) Characterize coniferales. Mention the families of
modern conifers. Briefly describe the global
distribution of modern conifers.

3+2+5