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?
(d) Name one pteridophyte showing apical annulas.

(e) What is meant by 'apoxogenesis'?

(f) Write two characters on the basis of which zosterophyllumpsida differ from Rhyniopsida.

(g) How does a monolette spore differ from a monosulcate pollen grain?

(h) What is meant by 'eusporangiatae'?

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 quadriflaria.

3. Answer any one of the following: $1 \times 10$

(a) Characterize Lepidodendrales. Write some important morpho-anatomical characters of Lepidodendron. Discuss about the reproductive structures of Lepidodendrids. $3 + 3 + 4$

(b) Characterize pteropsida. Give a comparative account between Schizaeacene, Gleicheniacene, 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: 2½ × 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 Pentoxyylon 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