

2018

M.Sc. 1st Seme. Examination

BOTANY

PAPER—BOT-104

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]

1. Answer any two questions : 2×2
- (a) Who transferred *Rhynia major* into a new taxon and why ?
- (b) What are annulus and stomium ?

(Turn Over)

- (c) How leptosporangiate sori differ from eusporangiate ones ?
- (d) Write the important characteristic features of Zosterophyllopsida.

2. Write short notes on any *two* of the following : 2×4

- (a) Apogamy in pteridophytes ;
- (b) Gametophytic structures of Rhyniopsida ;
- (c) Soral evolution in pteridophytes ;
- (d) Lepidocarpon.

3. Answer any *one* question : 1×8

- (a) Characterize Trimerophytopsida. Mention two genera of the group. Why Trimerophytopsida is regarded as the cardinal group in the evolution of higher clads of pteridophytes. 3+1+4
- (b) Who discovered the group progymnospermopsida ? Write down the basis of the discovery. Mention the families of the group. Discuss about the leaf forms and reproductive structures of Archaeopteridales. 1+2+2+3

Unit-II***Gymnosperms***

[Marks : 20]

4. Answer any *two* questions : 2×2
- (a) What is meant by hydasperman reproduction ? Where does it occur ?
 - (b) Write the male & female fructifications of Peltaspermaceae.
 - (c) Write the angiospermic characters of *Ephedra*.
 - (d) Write down the families of modern conifers.
5. Write short notes on any *two* of the following : 2×4
- (a) *Lagenostoma ovule* ;
 - (b) Fossil cycads ;
 - (c) Gymnosperm as a source of wood and resin ;
 - (d) *Caytonia* fruit.

6. Answer any one question :

1×8

(a) Illustrate different fossil taxa of *Pentoxylon* plant.

(b) How seed habit is being achieved by the higher plants from heterospory ? Discuss.
