

2018

BOTANY

[Honours]

PAPER – II

Full Marks : 90

Time : 4 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

GROUP – A

1. Answer any *ten* of the following : 2 × 10
- (a) What is tuberculate rhizoid? Where is it found?
 - (b) How does *Sphagnum* reproduce vegetatively?
 - (c) How does pollination in *Cycas* plant occur?

(Turn Over)

- (d) Name two Indian species of *Gnetum*.
- (e) What is the time span of Mesozoic era ?
- (f) What is sporoderm ?
- (g) Define mesogamy.
- (h) Write the importance of peristome teeth in *Funaria*.
- (i) What is NPC classification of pollen grains ?
- (j) What is coralloid root ?
- (k) What is index fossil ?
- (l) What is ligule ?
- (m) Write the role of bryophytes in horticulture.
- (n) What are the characteristics of *Pinus* leaf ?
- (o) What is progymnosperm ?

GROUP – B

Answer any five of the following : 8 × 5

2. (i) Write the description of sporophyte of *Riccia*.

- (ii) How does the dehiscence of capsule of *Marchantia* occur? 4 + 4
3. Describe the different types of apertures found in pollens. Mention the importance of the study of palynology. 5 + 3
4. Mention the economical and ecological importance of fossil. Compare compression and petrification. 5 + 3
5. Write the economic importance of pteridophytes. Write down the characteristic features of *Calamites*. 4 + 4
6. Discuss the general features of Bennettitales. What is meant by form genus? 6 + 2
7. What are the special features of fertilization in Angiosperm. Draw and describe the development of female gametophyte of angiosperms. 2 + 3 + 3
8. Classify pteridophytes (Sporne, 1975) with class characters and cite examples. 8
9. Describe the structure of sporophyte of *Marsilea*. 8

(4)

GROUP - C

Answer two of the following : 15×2

10. Classify Gymnosperms according to Stewart and Rothwell (1993) with class characters and cite examples. $8 + 5 + 2$
11. (i) Write the process of reproduction of *Selaginella*.
(ii) How *Selaginella* approaches seed habit? $12 + 3$
12. Write short notes on : $4 + 7 + 4$
(i) Anatomy of *Equisetum* stem;
(ii) Vegetative reproduction in Bryophytes; and
(iii) Polyembryony.
13. Write short notes on : $5 + 5 + 5$
(i) Structural features of *Glossopteris*;
(ii) Ecological and economic importance of Bryophytes; and
(iii) Telome concept.