

2019
BOTANY
[HONOURS]
Paper : I

Full Marks : 75

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.***GROUP-A****(Algae, Fungi and Lichens)****(Marks : 40)**

1. Answer any **five** of the following: 2×5=10
 - a) What are the pigment constituents of *Phaeophycean alga*?
 - b) Name an unicellular alga and a parasitic alga.
 - c) Name two algae used in industry.
 - d) What is diatomaceous earth?
 - e) Name one edible and one poisonous mushrooms.
 - f) What is the difference between saprophyte and parasite.

g) Cite two dissimilar characters between Cyanophyceae and chlorophyceae.

h) What is papulospore? Where do you find it?

2. Answer any **two** questions: 5×2=10

- a) Describe the sexual cycle of *Vaucheria*. 5
- b) What is VAM? State its significance in forestry and agriculture. 1+4=5
- c) Briefly describe the structure and function of the heterocyst. 5

3. Answer any **two** questions: 10×2=20

- a) What is parasexual cycle? Where do you find it? Discuss the stages of parasexual cycle with its significance. 2+1+(5+2)=10
- b) Mention the salient features of Rhodophyta. Compare the life cycle pattern of *Ectocarpus* and *Fucus*. 4+6=10
- c) Give a general account of Bacillariophyceae giving emphasis on auxospore formation. 10

[Turn over]

GROUP-B
(Plant Pathology and Bryophyta)
(Marks : 35)

4. Answer any **two** questions: $2\frac{1}{2} \times 2 = 5$

- a) What is inoculum? Give example.
- b) What is disease triangle?
- c) What is the difference between elater and pseudoelater?

5. Answer any **two** questions: $5 \times 2 = 10$

- a) Compare the sporophytes of *Riccia* and *Porella*. 5
- b) What is toxin? Write short note on a host specific toxin. 1+4=5
- c) Give a short account of different types of necrotrophic symptoms. Distinguish between hypertrophy and hyperplasia. 3+2=5

6. Answer any **two** questions: $10 \times 2 = 20$

- a) Describe the sporophyte of *Marchantia* with labelled diagram. What is nurse cell? 8+2=10

- b) Distinguish between primary and alternate host of *Puccinia graminis*. Name the spore forms on these hosts. Mention the control measures of rust of wheat in India. 3+3+4=10

- c) Give a brief outline of classification of Bryophyta following Proskaur (1957). Mention salient features of each class. 4+6=10
