

**2020-21**

**Time - 3 hours**

**Full Marks - 60**

*Answer all groups as per instructions.*

*Figures in the right hand margin indicate marks.*

*Draw labelled diagrams wherever necessary.*

**GROUP - A**

1. Fill in the blanks or express in technical term as required. [1 × 8]
  - (a) Viruses without a well defined three dimensional shape are called \_\_\_\_\_.
  - (b) Bacteria increase soil fertility through \_\_\_\_\_.
  - (c) Palmella stage is seen in \_\_\_\_\_.
  - (d) Macrandrous type of species are found in \_\_\_\_\_.
  - (e) During sexual reproduction in algae gametes are produced in separate structures called —
  - (f) The viruses which are parasites on bacteria are called —
  - (g) The plant body of Coleochaete possesses cytoplasmic out-growths called —

[ 2 ]

- (h) In Polysiphonia, the female plant bears the female sex organs called —

**GROUP – B**

2. Write notes on any eight of the following within two to three sentences each.

[1½ × 8

- (a) Viroids
- (b) Bacteriophage
- (c) Mycoplasma
- (d) Heterocyst
- (e) Eye spot
- (f) F.E. Fritsch
- (g) Coenobium
- (h) Nucule
- (i) Aplanospores of Vaucheria
- (j) Trichoblasts

**GROUP – C**

3. Write notes on any eight of the following within 75 words each.

[2 × 8

- (a) TMV
- (b) Sexual reproduction in Algae.

- (c) Spheroplasts
- (d) Cell structure of Oedogonium
- (e) Asexual reproduction in Coleochaete
- (f) Sexual reproduction in Vaucheria
- (g) Distinguishing features of Phaeophyta
- (h) Conceptacles of Fucus
- (i) Carposporophyte
- (j) Conjugation in Bacteria

**GROUP – D**

*Answer any four questions within 500 words each.*

- 4. Describe the process of multiplication of Bacteriophage. [6]
- 5. Describe the cell structure and nutrition in Bacteria. [6]
- 6. Discuss the various economic uses of Algae. [6]
- 7. Describe the life cycle of Chlamydomonas. [6]
- 8. Give an account of the alternation of generation in Ectocarpus. [6]
- 9. Discuss the life history of Fucus. [6]
- 10. Give an account of the thallus organisation in Polysiphonia. [6]