

**2024-28**

Full Marks : 75

Time : 3 Hours

*Candidates are required to give their answer in their own words as far as practicable. Their figures in the margin indicate full marks.*

Answer from **both** the Groups as directed.

**Group – A**

**(Compulsory)**

1. Very short answer type questions :  $1 \times 10 = 10$ 
  - (a) Define Microbes.
  - (b) Write down the two major viral replication cycles.
  - (c) How do cyanobacteria fix atmospheric nitrogen ?
  - (d) Write down one motile and one filamentous form of algae.
  - (e) What is a mycelium ?

- (f) What do you mean by etiology ?
- (g) The protein coat that surrounds the viral genome is called .....
- (h) The study of algae is known as .....
- (i) ..... pigment imparts red coloration to Rhodophyceae.
- (j) The cell wall of fungi is made up of .....

2. Write short note on : 1×5=5

Economic importance of virus with special reference to vaccine production.

**OR**

Life cycle pattern in algae.

**Group - B**

Answer any **four** questions of the following :  
15×4=60

3. Discuss in details, with well labelled diagrams, the steps involved in lysogenic life cycle of a virus.

- 4. Write down the general characteristics of bacteria with the help of suitable diagram describe the structure and its function of a bacterial cell.
- 5. Give an illustration on morphology and life cycle of Nostoc.
- 6. Write down the habitat, characteristic features and thallus organisation in charophyta.
- 7. How Phytophthora is different from true fungi ? Describe its general character and life cycle pattern.
- 8. Discuss the general symptoms, etiology, causal organism and disease cycle of early blight of potato.

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