

(3 Hours)

[Total Marks: 100]

- N.B.: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat labelled diagrams wherever necessary.

Q1. Answer any TWO of the following: 20

- A) Give general characters of Bacteria & Protozoa.
- B) What is sterilization? Explain in detail moist heat and chemical sterilization methods
- C) Write a detailed note on colony characters exhibited by bacteria.
- D) What is pure culture? Discuss any two methods of preparation of pure culture.

Q2. Answer any TWO of the following: 20

- A) Give detailed account of development of cystocarp in *Batrachospermum*.
- B) Give systematic position of *Polysiphonia*. Add a note on the thallus structure of *Polysiphonia*
- C) Give an account of asexual reproduction in *Vaucheria*.
- D) Explain the general characters of Bacillariophyta.

Q3. Answer any TWO of the following: 20

- A) Write general account of Basidiomycetes.
- B) Describe structure of gills in *Agaricus* with the help of suitable diagram
- C) Describe life cycle of *Puccinia* on the secondary host in relation with aecidiospore & pycnidiospore.
- D) Write a note on different types of spores and fructification in Deuteromycetes.

Q4. Answer any TWO of the following: 20

- A) Describe in detail the causal organism, symptoms, and control measures of "Tikka disease of Groundnut."
- B) Describe in detail the causal organism, host, symptoms, and disease cycle of "Citrus canker."
- C) Give a detail account of "Leaf curl virus in papaya."
- D) Write a general account of Physical control methods for plant diseases.

Q5. Answer any FOUR of the following: 20

- a) Acid fast staining
- b) Chantransia stage of *Batrachospermum*
- c) Systematic position of *Pinnularia*.
- d) Teleutospore in *Puccinia*
- e) Classification of *Alternaria*
- f) Diagrammatic representation of "Damping off seedling" disease.

(3 Hours)

[Total Marks-100]

All questions are compulsory

Figures to the right indicate full marks

Draw neat and labelled diagrams wherever necessary

Q.1 Attempt Any Two

20

- Write general characters of Mycoplasma & Actinomycetes as a microbes.
- What is sterilization? Explain in detailed any two methods of sterilization.
- Define culture media? Explain in brief Liquid and solid culture media preparation studied by you
- What is pure culture? Discuss any one method of preparation of pure culture.

Q.2 Attempt Any Two

20

- Describe thallus structure of *Batrachospermum*. Add a note on chantransia stage.
- Give an account of post fertilization changes in *Polysiphonia*..
- Give an account of sexual reproduction in *Vaucheria*.
- Explain the general characters of Chrysophyta.

Q.3 Attempt Any Two

20

- Give an account of sexual reproduction in Basidiomycetes.
- Describe L. S. of the gills in *Agaricus*. Add a note on systematic position.
- Describe the stages in the life cycle of *Puccinia* on the secondary host.
- Describe the life cycle of *Alternaria*. Add a note on its classification.

Q.4 Attempt Any Two

20

- Describe in detail the causal organism, and symptoms of damping of seedlings.
- Give a detailed account of leaf curl disease.
- Describe in detail the disease cycle of Citrus canker.
- Give a general account of biological control methods of plant diseases.