

Time – 3 hr.

Marks - 100

- N.B.**
1. All questions are compulsory.
 2. Draw neat labelled diagrams wherever necessary.
 3. All questions carry equal marks.

- Q.1 Attempt any two** 20
- a Give general characters of Bacteria and Mycoplasma.
 - b Write a brief note on dry heat & moist heat sterilization.
 - c What is pure culture? Enlist their types and discuss any one method of preparation of pure culture.
 - d Enumerate and explain steps involved in commercial production of antibiotics (*Penicillin*).
- Q.2 Attempt any two** 20
- a Describe the thallus structure of *Batrachospermum*. Add a note on its chlamydomonad stage.
 - b Discuss the sexual reproduction of *Polysiphonia*.
 - c Give an account of auxospore formation in *Pinnularia*.
 - d Explain the general characters of Xanthophyta.
- Q.3 Attempt any two** 20
- a Describe the different stages of the life cycle of *Agaricus*.
 - b Give a detail account on the classification of basidiomycetes upto orders.
 - c Describe the mycelia characteristics and reproduction in *Alternaria*.
 - d Describe the stages of life cycle of *Puccinia graminis* on Wheat plant.
- Q.4 Attempt any two** 20
- a Give causal organism, symptoms, disease cycle and control measures of ‘Tikka disease of groundnut’.
 - b Describe various physical methods of plant disease control.
 - c Write the main symptoms, nature of causal organism, disease cycle and control measures of ‘Citrus canker’.
 - d Give causal organism, symptoms, disease cycle and control measures of ‘White rust disease’.
- Q.5 Write short notes. (Attempt any four)** 20
- a Principle of Gram’s staining
 - b Economic Importance of Bacillariophyta.
 - c Systematic position of *Vaucheria*
 - d Asexual reproduction in basidiomycetes.
 - e Control measures of ‘Damping off disease’
 - f Pycnidium of *Puccinia*.