

Time: 3 Hours

Marks: 80

Question no. 1 is compulsory.

Attempt any 3 out of remaining questions.

Draw diagrams wherever necessary.

Q1. WRITE SHORT NOTE ON: ANY 4

(20)

- a) Protozoa
- b) synthetic media
- c) resistance mechanism
- d) Lyophilization
- e) streak-plate method

Q2. a) What are bacterial toxins? Discuss their mode of action.

(10)

b) What is Growth Curve? Explain its different phases with diagram.

(10)

Q3. a) Describe the structure of a bacterial cell along with the detailed functions of each organelles.

(10)

b) Discuss in detail various antibacterial agents and their mode of action.

(10)

Q4. a) Explain in detail the MPN test for water analysis.

(08)

b) Discuss the experiments performed by Pasteur.

(06)

c) Describe various antimicrobial sensitivity tests.

(06)

Q5. a) Explain the nutritional requirements of microorganisms.

(10)

b) Describe different physical methods of microbial sterilization.

(10)

Q6. a) What is a pure culture? State and explain different techniques of isolation of pure cultures.

(10)

b) Explain the role of soil as a habitat for microorganisms and state its physico-chemical properties.

(10)