

2063

B.E. (Bio-Technology) Third Semester
BIO-312: Microbiology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Answer the following briefly:-
- a) Write the Germ theory of disease.
 - b) Give mechanism of action of ethanol and gamma rays as sterilizing agents.
 - c) Define classification, commensalism.
 - d) Very briefly describe denitrification.
 - e) Draw structure of a T4 phage. (5x2)

UNIT - I

- II. a) Give contribution of Louis Pasteur to disprove abiogenesis.
b) Explain the structure and function of a bacterial flagella. (4,6)
- III. a) Describe different methods of preservation of microorganisms.
b) Explain the growth curve of bacteria. (2x5)
- IV. Elaborate on the physical methods of sterilization. (10)

UNIT - II

- V. What is fermentation? Write complete pathway for production of homolactic acid. (10)
- VI. Describe transduction as a means of recombination in bacteria. (10)
- VII. Give the role of microorganisms in the nitrogen cycle. (10)

x-x-x

