(i) Printed Pages : 3

(ii) Questions : 9

Roll No. .....

Sub. Code : 0 9 7 1

Exam. Code : 0 0 3 4

B.Sc. (Hons.) Biotechnology 2nd Semester

(2053)

GENERAL MICROBIOLOGY

Paper : BIOT-206-T

Time Allowed : Three Hours] [Maximum Marks : 67

Note :— Attempt *five* questions. Question No. 1 is compulsory. Attempt *one* question from each Unit.

1. Explain the following :

   (a) Contribution of J. Tyndall in microbiology.

   (b) Principle of Fluorescent microscopy.

   (c) General structure of virus.

   (d) Synchronous growth.

   (e) Pasteurization.

   (f) Generation time.

   (g) Endospore.

   (h) Antibiosis.

(i) Normal microflora.

(j) Monoauxic growth. 1.5×10

UNIT—I

2. Write short notes on the following :—

(a) Koch postulates.

(b) Germ theory of disease.

(c) Principle of Electron microscopy. 4,3,6

3. (a) Explain with Ray diagram principle of phase contrast microscopy.

(b) Give significance and drawbacks of compound light microscope. 8,5

UNIT—II

4. What is microbial classification ? Give major classification of microorganisms with characteristic features and examples of each. 13

5. (a) Give differences between prokaryotic and eukaryotic cell.

(b) With the help of labelled diagram differentiate between Gram positive and Gram negative bacteria. 4,9

UNIT—III

6. (a) Explain various phases of bacterial growth curve.

(b) Explain the following :—

(i) Diauxic growth

(ii) Chemostat. 7,6

7. Write short note on the following as chemical agents for controlling microbial growth :

(a) Phenol and phenolics

(b) Halogens

(c) Alcohols. 5,4,4

UNIT—IV

8. (a) Give name of five bacterial diseases and pathogens causing them.

(b) Explain various portals of entry for pathogens in humans. 5,8

9. (a) Explain Exotoxins and Endotoxins with examples.

(b) Explain the following :

(i) Symbiosis

(ii) Opportunistic Microorganisms. 7,6