

2053
B.Sc. (Hons.) Bio-Informatics
Fourth Semester
BIN-4003: Cell Biology and Microbiology

Time allowed: 3 Hours

Max. Marks: 60

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 briefly:-

- (a) Nucleoplasm
- (b) Protozoa
- (c) Continuous culture
- (d) Polysomes
- (e) Transduction
- (f) Passive transport
- (g) Cytosol
- (h) Growth curve

(8x1½)

UNIT - I

- II. a) Discuss the classification of organisms by cell structure.
b) Explain the structure and functions of Nucleus with a diagram. (2x6)
- III. a) Explain the functions of cytoskeleton elements in cell.
b) Elaborate on the Fluid Mosaic Model of Cell membrane. (2x6)
- IV. a) Discuss the chemical components of the biological membrane.
b) Discuss the function of the Golgi bodies. (2x6)

UNIT - II

- V. a) Write a note on the fundamentals of microbiology.
b) Discuss the criteria used for classification of microorganisms. (2x6)
- VI. a) Describe the unique features of viruses.
b) Explain the cell structure of bacteria. (2x6)
- VII. a) Discuss the significance of transformation in Bacteria.
b) What are the factors affecting growth of bacteria? (2x6)

x-x-x