

2125
M.Sc. (Bio-Informatics) First Semester
MBIN-8001: Basic Biology

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting atleast one question from each Unit.

x-x-x

I. Answer briefly:-

- a) Quaternary structure of protein
- b) Bacterial Capsule
- c) Peptidoglycan
- d) Thermophiles
- e) Plasmids
- f) Spontaneous mutations (6x2)

UNIT - I

- II. a) Discuss the postulates of Cell Theory.
- b) Explain the detailed structure of carbohydrates. (2x6)
- III. Discuss the five-kingdom classification of life. (12)

UNIT - II

- IV. a) Discuss the salient features of gram-positive bacteria.
- b) Differentiate between Archaeobacteria and Eubacteria. (2x6)
- V. a) Explain the structure and composition of Bacterial Cell wall.
- b) Elaborate on the role of Sex Pili, Flagella and spores in bacteria. (2x6)

UNIT - III

- VI. a) Discuss the Principles of Mendelian inheritance.
- b) Explain the theory of Natural Selection. (2x6)
- VII. Describe the process of Mitosis with well labelled diagrams. Mention its significance in growth and repair. (12)

x-x-x