

2054

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 following briefly:-

- (a) Transformation
- (b) Conjugation
- (c) RER
- (d) Permeability
- (e) Protozoa
- (f) Ribosomes
- (g) Nucleolus
- (h) Algae

(8x1½)

UNIT - I

II. a) Discuss the classification of organisms by cell structure.

b) Explain the organization of plasma membrane.

(2x6)

III. a) Elaborate on the structure of Golgi bodies.

b) Discuss the function of mitochondria.

(2x6)

IV. a) Write a note on the role of cell cytoskeleton elements.

b) Explain the significance of nuclear membrane.

(2x6)

UNIT - II

V. a) Write a note on the current classification of bacteria.

b) Discuss the characteristics of eukaryotic cells.

(2x6)

VI. a) Elaborate on the unique features of viruses.

b) Explain the significance of endospores and sporulation in bacteria.

(2x6)

VII. a) Differentiate between synchronous batch and continuous culture.

b) Discuss the role of transduction in bacterial reproduction.

(2x6)

x-x-x