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1079
B. Engg. (1st Year)-1st Semester
Bio Technology
BIO-101: Basic Biology

Time allowed: 3 Hours

Max. Marks: 50

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

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I. Attempt the following: -

- a) Define Biotechnology. List its branches.
- b) Write the function of Golgi-bodies in a cell.
- c) What are thylakoids? Draw a diagram.
- d) Write the principle of Gram's staining.
- e) Define enzymes.
- f) Write the coenzyme forms of flavin.
- g) Write the name of an unsaturated fatty acid. (2+1+2+2+1+1+1)

UNIT-I

- II. (a) Differentiate between a prokaryotic and a eukaryotic cell. Draw a diagram for each type of cell and label.
- (b) Write the names of two pathogenic organisms and their diseases caused. (7+3)
- III. (a) Describe meiosis in detail with diagrams.
- (b) Write the function of smooth endoplasmic reticulum. (7+3)
- IV. (a) Describe the structure of cell membrane in eukaryotes.
- (b) Write a note on theories of evolution. (5+5)

UNIT-II

- V. (a) Write the names and structures of any two disaccharides.
- (b) Write a note on phospholipids.
- (c) Discuss the role of water in biological system. (3+4+3)
- VI. (a) Describe the various levels of architecture present in proteins. Elaborate with diagrams and example.
- (b) What are porphyrins? What is their role? (7+3)
- VII. (a) Describe the role of biotechnology in agriculture. (5+5)
- (b) Classify enzymes and give examples.

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