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BT-1/DX-8009

BT-101E: Introduction to Biotechnology

Time : 3 Hours

Maximum Marks : 100

Note: Attempt any Five questions, selecting at least one question from each unit.

UNIT-I

Q-1 (a) What are the important characteristics of living organisms. 10

(b) Write down the important functions of nuclear, ribosomes, and mitochondria. 10

Q-2 (a) Define carbohydrates. Give different classes of carbohydrates with examples. 12

(b) What are Vitamins? Briefly describe the fat soluble vitamins. 8

UNIT-II

Q-3 Write notes on:

- (a) Replication
- (b) Transcription
- (c) Translation

6+6+7

Q-4 (a) Briefly explain the beneficial economic importance of bacteria in the field of industry, agriculture, medicine and waste treatment. 12

(b) Explain various characters of viruses. 8

UNIT-III

Q-5 (a) What is recombinant DNA technology? 5

(b) Write down various tools used in recombination DNA technology. 15

Q-6 (a) Define transgenic animals and how they are produced? 10

(b) List some examples of transgenic animals along with their utility. 10

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UNIT-IV

Q-7 Define biotechnology. Write down the applications of biotechnology in agriculture, medicine and forensic science. 20

Q-8 Write notes on:- 10+10

(a) Bioinformatics

(b) Biosensors