Roll No. ..... Total No. of Page : 3

BT - DEC 2010_2 - 1

BT-1/DX-8010

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) Draw a well labelled diagram of a eukaryotic cell. 10

(b) Write down the classification of proteins on the basis of their structure. 10

Q-2 (a) Differentiate between cofactor and coenzyme. 4

(b) Write down the general properties of enzymes. 4

(c) Describe the structure of DNA. 4

(d) Discuss the effect of temperature and pH on enzyme activity. 8

UNIT-II

Q-3 (a) Give brief notes on the following:

(i) Light reaction. 7

(ii) Growth regulators of plants. 7

(b) How microbes help in nitrogen fixation. 6

Q-4 (a) Describe the structure of Kidney. 6

(b) Write a note on "respiratory system of humans". 5

(c) Discuss the economic importance and control of microbes. 10

UNIT-III

Q-5 (a) Differentiate between mitosis and meiosis. 10

(b) Write short notes on: 5+5

(i) Gene Cloning.

(ii) Monohybrid Cross.

Q-6 (a) Describe the tools used in rDNA Technology. Also explain the significance of rDNA Technology. 15

(b) Bioinformatics is considered as an alliance between Biology and Information Sciences. Justify. 5

UNIT-IV

Q-7 Discuss the applications of Biotechnology in following fields: 7+7+6

(a) Agriculture.

(b) Medicine.

(c) Environment.

Q-8 Write short notes on:- 10+10

(a) Genetically modified organism.

(b) Public Perception of Biotechnology.