



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID :154207

Roll No.

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B. Tech.

(SEM. II) THEORY EXAMINATION, 2014-15 INTRODUCTION TO BIOTECHNOLOGY

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions.

- 1 Attempt any two parts of the following:- **10x2=20**
- (a) Define role of biochemical engineering, in biotechnology along with a particular case study.
 - (b) How does biotechnology can improve the life of our society? Discuss.
 - (c) Write short note on :
 - (i) Unit operations and unit processes
 - (ii) GMO.
- 2 Attempt any two parts of the following:- **10x2=20**
- (a) Describe the chemical structure of glucose in pyranose and furanose forms.
 - (b) What are nucleotides? Draw their chemical structures.
 - (c) What are enzymes? Describe their classification.

- 3** Attempt any two parts of the following : **10x2=20**
- (a) What is the basic unit of life? Support your answer.
 - (b) How do microbes help in biotechnology? Explain with examples.
 - (c) Write short note on classification of microbes.
- 4** Attempt any two parts of the following : **10x2=20**
- (a) Give the historical overview of bioinformatics along with current applications.
 - (b) What are types of biological databases? Explain any one in detail.
 - (c) Write short note on ExPASy.
- 5** Attempt any two parts of the following : **10x2=20**
- (a) What are implications of human genome project? Discuss.
 - (b) Define the prokaryotic gene structural elements. How could you predict them?
 - (c) Write short note on:
 - (i) SNPs and disease susceptibility
 - (ii) Comparative genomics.
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