

1128

B.Sc. (Hons.) Biotechnology

First Semester

BIOT-Sem-I-VI-T: Introduction to Biotechnology

Time allowed: 3 Hours

Max. Marks: 67

NOTE: Attempt five questions in all, including Question No. IX (Unit-III) which is compulsory and selecting two questions each from Unit I -II.

x-x-x

UNIT – I

- I. a) Discuss the why *E. coli* serves as a model bacterium.
b) Explain the applications of fungi in Biotechnology. (7,6)
- II. a) Discuss the events in advent of Biotechnology.
b) Describe the applications of *Musmusculus* in Biotechnological research. (7,6)
- III. a) Discuss the structure and function of ribosomes.
b) Discuss the principle and applications of chromatography. (7,6)
- IV. a) Discuss the role of genomics in Biotechnology.
b) Describe the significance of vectors in recombinant DNA technology. (7,6)

UNIT – II

- V. Discuss the applications of Biotechnology in fermentation processes. (13)
- VI. a) Describe the significance of gene therapy.
b) Discuss how green technology helps in reducing pollution. (7,6)
- VII. a) Discuss the advantages transgenic animals.
b) Explain how genetic engineering is responsible for bioterrorism. (7,6)
- VIII. Discuss legal implications of Biotechnology. How do ethics play a major role in Biotechnological research? (13)

P.T.O.

(2)

UNIT – III

IX. Attempt the following:-

- a) Define white Biotechnology,
- b) Name one model bacterium?
- c) Mention one application of Biotechnology in industry?
- d) Name one yeast having Biotechnological application.
- e) What is proteomics?
- f) What is a vector?
- g) What is the need of green technology?
- h) Why gene therapy is named so.
- i) What is Biowarfare?
- j) Mention the principle for electrophoresis. (10x1½)

x-x-x