

2012

B.Sc. (Hons.) Biotechnology

First Semester

BIOT-106-T: Introduction to Biotechnology

Time allowed: 3 Hours

Max. Marks: 67

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

I. Answer the following:-

- a) What is Red biotechnology? (2)
- b) What is wet heat sterilization? (2)
- c) What is gene therapy? (2)
- d) What is Bioterrorism? (2)
- e) Define restriction enzymes. (2)
- f) What type of ribosomes are present in prokaryotes? (2)
- g) What is the role of green technology in pollution control? (3)

### UNIT - I

- II. Discuss the role of Biotechnology in Environment protection. (13)
- III. a) Discuss the role of *Neurospora* as a model organism.  
b) Discuss the applications of viruses in rDNA technology. (6,7)

### UNIT - II

- IV. a) Discuss the structural features of DNA  
b) Discuss the concept of transcriptomics. (7,6)
- V. a) Discuss the properties of PUC 8.  
b) Give an overview on technique of centrifugation. (7,6)

### UNIT - III

- VI. Describe the role of Biotechnology in Diagnostics with suitable example. (13)
- VII. Discuss the basics of Biotechnology in fermentation process. (13)

P.T.O.

(2)

**UNIT - IV**

- VIII. a) Discuss two methods to raise transgenic plants.  
b) Discuss applications of transgenic animals. (7,6)
- IX. a) Write a note on Bioterrorism.  
b) Discuss social implications of Biotechnology. (7,6)

x-x-x