

2012

B.A./B.Sc. (General) First Semester

Industrial Microbiology

IMB-102: Microbial Genetics and Molecular Biology

Time allowed: 3 Hours

Max. Marks: 33

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

x-x-x

I. Write short note on following:-

- a) Recombination in Bacteria (2)
- b) Mutagens (2)
- c) Flow of Information (2)
- d) Prototrophs (2)
- e) Genomics (1)

**UNIT - I**

- II. Discuss DNA as genetic material. Differentiate between DNA and RNA. (6)
- III. Describe the process of Translation. (6)

**UNIT - II**

- IV. Explain the concept of Mutation along with various ways for selection of mutants. (6)
- V. Describe different ways of DNA repair. (6)

**UNIT - III**

- VI. Write in details about isolation of Auxotrophs. (6)
- VII. How the recombinant proteins are produced in Bacteria? Discuss their applications and limitations. (6)

**UNIT - IV**

- VIII. What do you mean by Amplified Genomic DNA library? How is it produced? (6)
- IX. Explain Cosmids and Transposons. (6)

x-x-x