

1128

**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. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Write note/ give reasons/ Explain:

- a) What is a nucleoside and nucleotide?
- b) What is reverse transcriptase?
- c) What is a replication fork?
- d) What is frameshift mutation? (4x1½)
- e) What are mutagens? (1)

**UNIT – I**

- II. Discuss in detail the replication process in prokaryotes? (6½)
- III. Discuss the initiation and termination process of translation in prokaryotes? (6½)

**UNIT – II**

- IV. Discuss the forward and reverse mutations? What is conditional lethality and its use in mutant selection? (6½)
- V. What are mutagenic agents? How are detected and isolated? (6½)

**UNIT – III**

- VI. Discuss the transduction and transformation in bacteria? (6½)
- VII. How different recombinant proteins are produced in yeast and give its limitations? (6½)

**UNIT – IV**

- VIII. Give a brief account of plasmids and cosmids? (6½)
- IX. What are sub genomic libraries? How can you select a desired clone from a library? (6½)

x-x-x

(200) The first of these is the fact that the first of the three is the most important.

(201) The second is the fact that the second of the three is the most important.

(202) The third is the fact that the third of the three is the most important.

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### III - THE

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### IV - THE

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### V - THE

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