Exam.Code:0001
Sub. Code: 0085

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