

RN=36

Exam.Code:0001

Sub. Code: 0085

1127

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 note/ give reasons/ Explain:

- a) Promoter
- b) What is oriC? Why is it important for replication?
- c) Transposon.
- d) Poly – A tail of mRNA
- e) Name any two recombinant protein produced in yeast
- f) Partial digestion

(6x1½)

UNIT – I

II. Explain DNA replication in Prokaryotes.

(6)

III. Write note on:-

- a) Structure of tRNA
- b) Reverse Transcriptase

(3,3)

UNIT – II

IV. What are mutagens? Explain the role of Base analogs, intercalating agents and U.V. radiations as mutagens.

(6)

V. Write a note on:-

- a) Conditional lethality
- b) One method for DNA repair

(3,3)

UNIT – III

VI. a) What is conjugation? What is the role of Hfr in conjugation?

b) Isolation of auxotrophs

(3,3)

VII. Write a note on limitations of protein production in bacteria and possible solution.

(6)

P.T.O.

(2)

UNIT - IV

- VIII. What is a cosmid? Discuss the role of in vitro packaging in cosmid construction. (6)
- IX. Define genomic library. Explain the steps in construction of genomic library and list the advantages and disadvantages on the use of genomic library. (6)

x-x-x