Exam.Code:0041
Sub. Code: 1001

1129
B.Sc. (Hons.) Bio-Informatics
Third Semester
BIN-3001: Fundamentals of Molecular Biology

Time allowed: 3 Hours **Max. Marks: 60**

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

x-x-x

I. Answer the following:-

a) Major Differences in DNA replication in prokaryotes with eukaryotes.

b) Explain role of 5' Cap formation?

c) Explain transposable elements and their significance?

d) What is Wobble hypothesis?

e) What are mutagenic agents? Give examples

f) Explain induction and repression with suitable examples? (6x2)

UNIT – I

II. Describe various modes of DNA replication. Discuss in detail mechanism involved in DNA replication in prokaryotes. (12)

III. Discuss in detail the various types of RNA modifications and their roles. (12)

IV. Describe various mechanisms involved in DNA repair mechanisms. (12)

UNIT – II

V. Discuss in detail the mechanism involved in translation in prokaryotes. (12)

VI. Discuss in detail the regulation of lac operon. (12)

VII. Describe various types of mutants and techniques to characterize mutants. (12)

x-x-x