Exam.Code:0005
Sub. Code: 17461

2125

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

Biochemistry

Paper -A: Molecular Biology – I

Time allowed: 3 Hours | Max. Marks: 45

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

x-x-x

I. Answer the following:-

a) What is the difference between transition and transversion mutations?

b) Define introns and exons.

c) Define histones and nucleosomes.

d) Define codon and anticodon?

e) Define supercoiling and linking number

f) What is the function of reverse transcriptase? (6x1½)

UNIT - I

II. a) Explain B DNA and Z DNA.

b) Describe any two experiment to prove DNA as genetic material. (4,5)

III. a) Describe the repetitive sequences found in eukaryotic genome in genome.

b) What is the difference between Heterochromatin and Euchromatin? (5,4)

UNIT - II

IV. a) Explain the process of DNA replication in prokaryotes.

b) Discuss the role of telomeres in Eukaryotic replication. (5,4)

V. a) Describe the any two mechanisms involved in DNA repair.

b) Describe the experiment to prove DNA replication is semiconservative. (5,4)

UNIT - III

VI. a) Explain Alternative splicing and mRNA editing?

b) Explain the mechanism of inhibitors of transcription. (5,4)

P.T.O.

VII. a) Explain prokaryotic and eukaryotic promoters.

b) Describe rho dependent and rho independent termination. (5,4)

UNIT - IV

VIII. a) Explain the difference between prokaryotic and eukaryotic translation.

b) Explain the process of Amino acid Activation. (5,4)

IX. a) Describe post translational modification of proteins.

b) Write down the name of various inhibitors of Translation and their mechanism of action. (5,4)

x-x-x