

92273

B.Sc. 4th Semester (New Scheme)

Examination, May-2016

BIOTECHNOLOGY

Paper-BT-402

Molecular Biology

Time allowed : 3 hours]

[Maximum marks : 40

Note : Question No. 1 is compulsory and attempt any four more questions selecting one question from each unit given below. All questions carry equal marks.

1. Write the notes on following : 1×8=8
- (a) Define molecular biology
 - (b) Name of nitrogenous bases of DNA
 - (c) Mutation
 - (d) Name of factor responsible for DNA damage
 - (e) tRNA function
 - (f) Spliceosome
 - (g) Genetic code
 - (h) Promoter

Unit-I

2. Describe the similarity and differences between the prokaryotic and eukaryotic DNA replication. 8
3. Write the notes on any two : 8
- (a) Watson and Crick model of DNA
 - (b) DNA polymerase enzyme
 - (c) Fidelity of replication.

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Unit-II

4. Describe the various causes and forms of DNA damages. 8
5. Write the notes on any *two* : 8
- (a) Mechanisms of DNA repair
 - (b) Non homologous end joining
 - (c) Photo-reactivation.

Unit-III

6. Describe the molecular mechanism of transcription in prokaryotic. 8
7. Write the notes on any *two* : 8
- (a) Type of RNA
 - (b) Eukaryotic RNA polymerase
 - (c) Polyadenylation

Unit-IV

8. Compare the prokaryotic and eukaryotic translation procedure. 8
9. Describe the post-translational modifications of proteins in detail. 8