

(i) Printed Pages: 3

Roll No.

(ii) Questions : 9

Sub. Code :

0	5	5	6
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Exam. Code :

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B.A./B.Sc. (General) 6th Semester
(2054)

BIO CHEMISTRY

Paper-A : Molecular Biology-II

Time Allowed : Three Hours]

[Maximum Marks : 45

Note :—Attempt **FIVE** questions, including Q. No. 1 which is compulsory and selecting **ONE** question from each section. Students are advised to solve questions in ordered manner and clearly mention their numbers and sub parts as well.

1. Give answer of the following :—

- (i) Define the recombinant molecule.
- (ii) What is the leucine zipper ?
- (iii) Write one function of *Lac* operon.
- (iv) Give names of two types of non-coding RNAs.
- (v) Write one function of ligase enzyme.
- (vi) What is the BAC ?

(vii) What is SNPs ?

(viii) Give names of two genetic diseases.

(ix) What is the TATAA box ?

9×1=9

SECTION—I

2. (a) What is *Lac* operon ? How it regulates nutrition in prokaryote ?
- (b) Briefly write about the two post-translational modifications in proteins. 5,4
3. (a) Write about the phase infection regulate.
- (b) How protein is translocated into the chloroplast ? 5,4

SECTION—II

4. (a) Describe in brief, the Transcription bubble in the eukaryotic transcription.
- (b) What is the mRNA processing ? How it regulates the gene expression process ? 4,5
5. (a) Write in brief about the CAAT box and its role in transcription.
- (b) What is the leucine zipper and Zn fingers ? 5,4

SECTION—III

6. (a) What is the recombinant technology ? Write its various applications in human life.
- (b) What are genomic libraries ? Write their roles in gene cloning. 5,4

7. . (a) Briefly describe, two genes which regulate the drosophila development.
- (b) Describe in brief about a prokaryotic cloning vector.
- 4,5

SECTION—IV

8. (a) Write the main structural features of eukaryotic genome.
- (b) Write in short about the Sanger's method of genome sequencing.
- 5,4
9. (a) What is the DNA finger printing ?
- (b) What are the SNP ? Write its role in genetic disease diagnostic.
- 4,5