

Roll No.

Total Pages : 2

CMDQ/D-23

5167

MOLECULAR BIOLOGY

Paper–M–Z 301

Time allowed : 3 Hours]

[Maximum Marks : 80

Note : Attempt **five** questions in all, selecting **one** question from each unit. Questions No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer briefly the following: 8×2=16
- (i) Shine Dalgarno sequence (ii) Rec A
(iii) Kozak rule (iv) Telomerase
(v) Western Blotting (vi) TATA Box
(vii) Degenerate genetic code (viii) CpG Islands.

UNIT–I

2. Describe about enzymes and accessory proteins involved in DNA replication with its detailed mechanism. 16
3. Write a detail note on mechanism of 5'-Cap formation, 3'-end processing and polyadenylation in eukaryotes. 16

UNIT–II

4. Give an account on mechanism and regulation of translation in Prokaryotes. 16

5. Explain in detail about Co- and Post-translational transport of proteins with their modifications in ER and Golgi. 16

UNIT–III

6. Describe in detail about Holiday junction and their significance in recombination mechanisms. 16
7. Explain in detail about molecular mechanisms of antisense molecules and their applications. 16

UNIT–IV

8. Describe about molecular markers in genome analysis and their applications in molecular biology. 16
9. Write note on the followings: 2×8=16
- (a) cDNA and genomic libraries.
(b) Chromosome walking.