

D 120202**(Pages : 2)****Name.....****Reg. No.....****SIXTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
MARCH 2025****Microbiology****MBG 6B 15 (E2)—MOLECULAR BIOLOGY****(2019 Admission onwards)****Time : Two Hours****Maximum : 60 Marks***Wherever needed answers must be supported by structural illustrations and figures.***Section A (Short Answer Type Questions)***Answer **all** questions.**Each question carries 2 marks.***Write Briefly on :**

1. Glycosidic Bond.
2. Cot curve.
3. Linking number.
4. Codon.
5. Topoisomerase.
6. Photoreactivation.
7. Pribnow box.
8. tRNA.
9. Wobble effect.
10. Repressor.
11. Intron.
12. Rolling circle model.

(Ceiling 20 Marks)**Turn over**

Section B (Paragraph Type Questions)

*Answer all questions.
Each question carries 5 marks.*

Write notes on :

13. Comparatively analyze the structure of DNA and RNA
14. Briefly explain Frameshift mutations
15. Briefly explain the mechanism and significance of mRNA splicing in eukaryotes
16. Explain the features of trp operon.
17. Briefly explain the concept of DNA repair.
18. Explain degeneracy and wobbling of genetic code.
19. Differentiate between rho dependent and rho independent termination of transcription

(Ceiling 30 Marks)

Section C (Essay Type Questions)

*Answer any one question.
Question carries 10 marks.
(Maximum : $1 \times 10 = 10$ Marks)*

Write essay on :

20. Describe the semiconservative mechanism of DNA replication and the proteins involved in it.
21. Explain the mechanism of prokaryotic translation.