



DCBT – 401

IV Semester B.Sc. Examination, September/October 2023
(NEP – Freshers)
BIOTECHNOLOGY (Paper – IV)
Molecular Biology

Time : 2½ Hours

Max. Marks : 60

Instruction : Draw a **neat** labelled diagram **wherever** necessary.

SECTION – A

- I. Write a short notes on the following. (5×2=10)
- 1) SD sequence
 - 2) Gyrase
 - 3) Rho factor
 - 4) Intron
 - 5) Hogness box.



SECTION – B

- II. Answer **any four** of the following. (4×5=20)
- 6) Give an account on the different forms of DNA.
 - 7) Describe the different methods of repair mechanism in DNA.
 - 8) What is a promoter ? Add a note on the feature of eukaryotic promoter.
 - 9) Write a note on post transcriptional modification in eukaryotes.
 - 10) What is genetic code ? Add a note on wobble hypothesis.

SECTION – C

- III. Answer **any three** of the following. (3×10=30)
- 11) Explain the structure of DNA.
 - 12) Describe the mechanism of prokaryotic replication. Add a note on rolling circle model.
 - 13) Discuss the process of transcription in prokaryotes.
 - 14) What is an operon ? Explain lac operon.
 - 15) Explain the mechanism of protein synthesis in prokaryotes.
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