

Time: 2 ½ Hours

[Total Marks: 60]

- N.B.:** 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat and labelled diagram wherever necessary.

Q 1 Explain the process of initiation of DNA replication in eukaryotes. Comment **12**
on the role of enzymes involved in it.

OR

Q 1 Give detail account of DNA recombination with reference to Holliday **12**
model.

Q 2 Discuss briefly transcription process in bacterium. **12**

OR

Q 2 Give detail account on transcription of protein coding genes with RNA **12**
polymerase II in eukaryotes.

Q 3 Describe the process of splicing in detail and give its significance. **12**

OR

Q 3 Write a detailed note on RNA localization. **12**

Q 4 Explain in brief post-translation modifications of proteins. **12**

OR

Q 4 Ribosomes are the moving factories of protein synthesis – substantiate. **12**

Q 5 Write notes on any Four of the following **12**

- Nucleosome
- Termination of DNA replication in prokaryotes
- Ribosomal RNA
- Riboswitches
- Introns and exons
- Quaternary structure of proteins
