



UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2020

CC11- ZOOLOGY
MOLECULAR BIOLOGY

Full Marks: 40

ASSIGNMENT

The questions are of equal value.
The figures in the margin indicate full marks.

Answer any four of the following questions

10×4 = 40

1. With a suitable diagram, illustrate the clover-leaf model of tRNA.
2. Describe the process of initiation and elongation of DNA replication in prokaryotes with a note on replisome.
3. Describe the steps of charging of tRNA and formation of initiation complex during translation in prokaryotes.
4. Describe the structure of a typical promoter, intrinsic terminator and extrinsic terminator and the role of sigma factor and rho factor in initiation and termination respectively.
5. Describe the negative and positive regulation of gene expression in prokaryotes citing the example of *lac* operon.
6. Give a detailed account of different mechanisms of repair of DNA involving excision of damaged nucleotides.
7. Write an elaborate essay on the nature of genetic code.
8. Describe the method of DNA sequencing by Sangar method.

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