Reg. No. ☐☐☐☐☐☐☐☐☐

BCH 501

III Semester M.Sc. Degree Examination, December 2018
BIOCHEMISTRY
Molecular Biology

Time : 3 Hours   Max. Marks : 70

Note *: Answer Part – **A** and **any five** of the Part – **B**.*

PART – A

1. Answer **any ten** of the following.   **(10×2=20)**

   a) Distinguish between prokaryotic and eukaryotic RNA polymerase.

   b) How inteins are different from introns ?

   c) What are topoisomerases ? Mention their significance.

   d) What is N end rule ?

   e) Enlist the differences between prokaryotic and eukaryotic replication.

   f) Write the mechnism of action of ligase.

   g) Write any two transcription inhibitors.

   h) What is Shine-Dalgarno sequence ? Mention its significance.

   i) Name any two stop codons.

   j) What are homeotic genes ? Give an example.

   k) Define triplet binding assay.

   l) What is θ (theta) mode of replication ?

P.T.O.

PART – B

Answer **any five** of the following.   **(5×10 =50)**

2. a) Explain the mechanism of ubiquitin mediated protein degradation.

   b) Write a note on the role of chaperones in protein folding.   **(5+5=10)**

3. a) Discuss the role of upstream AUG codons in gene regulation.

   b) Write an account on the initiation of protein synthesis in eukaryotes.

   (5+5=10)

4. a) Write on the termination of transcription in prokaryotes.

   b) Explain the mechanism of regulation of lac-operon.   **(5+5=10)**

5. a) Discuss the rolling circle model of replication.

   b) Give an account on the mechanism of initiation of replication in
      prokaryotes.   **(5+5=10)**

6. a) Write a note on the regulation of tryptophan operon.

   b) Describe in detail about the contribution of Khorana and Nirenberg in
      deciphering the genetic code.   **(5+5=10)**

7. a) Explain the mechanism of QB virus RNA synthesis.

   b) Write in detail about the role of snail and twist in protein patterning . **(5+5=10)**

8. a) How proteins are O-glycosylated ? Explain.

   b) Enlist the universal features of genetic code.   **(5+5=10)**

9. Write short note on **any two** :   **(5+5=10)**

   a) Transcription factors

   b) Eukaryotic ribsosomes

   c) Meselson and Stahl experiment.

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