(20518) Roll No. .....

B. Sc. (Micro.)-II Year

3498

B. Sc. (Micro.) Examination, May 2018

Molecular Biology

(B-205)

Time : Three Hours] *[Maximum Marks : 50*

Note : Answer any *Five* questions. All questions carry equal marks.

1. Discuss the different forms of DNA. Which form of DNA was proposed by Watson & Crick. 10

2. What is 'Central Dogma' of Molecular Biology ? Briefly give the mechanism of polypeptide synthesis. 10

3. Give a brief account of different kinds of RNAs known in the living systems. Discuss the structure and function of tRNA. 10

4. Explain the following : 5×2=10

   (a) Replication is a semiconservative process in terms of DNA

   (b) Replication fork.

5. Give difference between the following : 5×2=10

   (a) Prokaryotic and eukaryotic DNA polymerase

   (b) Prokaryotic and eukaryotic protein synthesis.

6. Write short notes on the following : 2½×4=10

   (a) Cairns model

   (b) Clover Leaf model of Holley (tRNA)

   (c) The genetic code is a triplet code

   (d) The wobble hypothesis.

7. Write short notes on the following : 2½×4=10

   (a) Transposons

   (b) Translocation in protein synthesis

   (c) Chain termination codons

   (d) Teminism.

8. Explain the regulation of gene expression with the help of 'Operon model'. 10

9. Write short notes on the following : 5×2=10

   (a) Operator gene

   (b) Promotor gene.

10. Write short notes on the following : 2½×4=10

   (a) DNA transformation

   (b) Transduction

   (c) Barbara McClintock

   (d) Leaderberg and Tatum experiment.