

D-3733

B. Sc. (Part III) EXAMINATION, 2020

BIOCHEMISTRY

Paper First

(Molecular Biology)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt all the five questions. One question from each Unit is compulsory. All questions carry equal marks.

Unit—I

1. Write short notes on the following

- (a) Hershey-Chase experiment
- (b) Properties of nucleic acid
- (c) Secondary structure of nucleic acid

Or

Write the experimental evidence in detail, that prove that the nucleic acids as genetic information carriers.

Unit—II

2. Write short notes on any two of the following :

- (a) Types of DNA
- (b) The secondary and tertiary structure of RNA
- (c) Satellite DNA

Or

Discuss the process of nucleic acid (DNA and RNA) sequencing in detail.

Unit—III

3. Write short notes on any two of the following :

- (a) Function of DNA polymerase
- (b) DNA replication in Prokaryote
- (c) Reverse transcriptase

Or

Describe the prokaryote transcription in detail.

Unit—IV

4. Write short notes on any two of the following :

- (a) The biological significance of degeneracy
- (b) Ribosome structure
- (c) Lac operon

Or

What is genetic code ? Explain the basic feature of genetic code. Also discuss the Wobble hypothesis.

Unit—V

5. Write short notes on any two of the following :

- (a) UV repair system in E. coli
- (b) Restriction endonuclease
- (c) Lederberg's replica plating experiment

Or

Give a detailed account on a mutation.
