

Roll No.

DD-477

**M. Sc. (Second Semester)
EXAMINATION, May-June, 2020**

MICROBIOLOGY

Paper First

(Genetics and Molecular Biology)

Time : Three Hours

Maximum Marks : 80

Note : All questions are compulsory. All questions carry equal marks.

1. Write short notes on the following :

- (a) Pseudoallele
- (b) Mismatch repair system
- (c) RNA Capping
- (d) Ribosome

Unit—I

2. Discuss different kinds of radiations and chemical mutagens utilized for induction of mutations.

Or

Write notes on the following :

- (i) Codominance
- (ii) Segregation

(B-15) P. T. O.

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Unit—II

3. Discuss at least *two* experiments which demonstrated the semiconservative mode of DNA replication.

Or

Write notes on the following :

- (i) Nucleotide excisions repair system
- (ii) Homologous recombination

Unit—III

4. Write an essay on RNA synthesis.

Or

Write notes on the following :

- (i) RNA processing
- (ii) Type of RNA

Unit—IV

5. How is synthesis of *m*-RNA brought about on DNA template ? Outline the role of sigma factor and core enzyme in this process.

Or

Write notes on the following :

- (i) Translation
- (ii) Two-dimensional structure of *t*-RNA