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NY—118—2023

FACULTY OF SCIENCE

M.Sc. (First Year) (Second Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/New Pattern)

MICROBIOLOGY

[Modern Microbial Genetics (MB 202)]

(Friday, 8-12-2023)

Time :10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) Attempt all questions.

(ii) Represent your answers with suitable diagrams if necessary.

(iii) Answer to the point.

1. Illustrate bacterial DNA replication process in detail. 15

Or

What is effect of U.V. radiation on DNA ? How that damage is repaired in presence of light ?

2. Explain in detail structure and functions of RNA polymerase. 15

Or

Illustrate in detail process of translation in bacteria.

3. Take a detailed account of regulation in tryptophan operon. 15

Or

Define quorum sensing. Explain mechanism of quorum sensing in Gram +ve and Gram -ve bacteria.

P.T.O.

WT

(2)

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4. Write on construction of linkage maps using bacteriophages. 15

Or

What is cotransformation ? Write in detail molecular mechanism of gene transfer using plasmids.

5. Write short notes on (any *three*) 15

- (a) Extrachromosomal replicon
- (b) Polysomes
- (c) Stingent response
- (d) Hfr strains.

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