

Code No. : B02/207

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Second Semester Online Examination, May-June, 2022

M. Sc. MICROBIOLOGY

Paper II

MICROBIAL GENETICS

Time : Three Hours] [Maximum Marks : 80

Note : Part A and B of each question in each unit consist of 'very short answer type question' which are to be answered in one or two sentences. Part C 'Short answer type' and D 'Long answer type' of each question should be answered within the word limit mentioned.

UNIT-I

1. (A) What is Alkylation ? Give the reason why alkylation damages the DNA ? 2
- (B) Write a note on Pyrimidine dimer ? 2
- (C) What are the Biological indication of DNA Damage ? (word limit 200-250) 4

OR

Write a note on evidences of Repair system ?

P.T.O.

- (D) Describe in brief about the DNA damage system ? (word limit 400-450) 12

OR

Explain in brief about the various DNA Repair pathway ?

UNIT-II

2. (A) What is Mutagen ? 2
- (B) What is Recon ? 2
- (C) Write a note on Biochemical Basis of mutation ? (word limit 200-250) 4

OR

Difference between Reversion and supression ?

- (D) Explain what is mutation and its types in brief ? (word limit 400-450) 12

OR

Write a detail note on Recombination ?

UNIT-III

3. (A) Write molecular characteristics of PBR322 ? 2

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- (B) What are transposable elements ? 2
(C) Explain in brief about genetic analysis of yeast ? (word limit 200-250) 4

OR

What is Lysogeny ? Write its application ?

- (D) Explain in brief about the gene transfer mechanism ? (word limit 400-450) 12

OR

What is cloning vector ? Describe plasmid vector in detail ?

UNIT-IV

4. (A) What is C-value paradox ? 2
(B) What is autotrophic mutants ? 2
(C) Explain the method of construction of Bacterial strains ? (word limit 200-250) 4

OR

Write a note on RADP ?

- (D) Explain in brief about DNA sequencing methods ? (word limit 400-450) 12

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OR

Write a brief note on Bacterial Genotyping ?

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