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B04-307 (A)

Fourth Semester Online Examination, May-June, 2022

M. Sc. MICROBIOLOGY

Paper III

MICROBIAL BIOTECHNOLOGY

Time : Three Hours] [Maximum Marks : 80

Note : (i) Part A and B of each question in each Unit consist of very short answer type questions which are to be answered in one or two sentences.

(ii) Part C (Short answer type) (Word limit 200-250) and Part D (Long answer type) of each question should be answered within the word limit (400-450 words) mentioned.

UNIT-I

1. (A) Give the full form of abbreviation of YAC. 2
- (B) Give the full form of abbreviation of BAC. 2
- (C) The maximum number of plasmids in a bacterial cell. 4

Or

What is Ligation ?

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- (D) Give the core technique and essential enzymes used in recombinant DNA technology. 12

Or

Write a brief account of different types of cloning vectors.

UNIT-II

2. (A) Which bacterium is called natural plant engineer ? 2
- (B) Which chemical is used as heat shock in bacterial transformation ? 2
- (C) Which metal is used in particle bombardment method. 4

Or

What is the cell type of biolistic ?

- (D) Write an essay on site directed mutagenesis. 12

Or

Write an account of genomic library.

UNIT-III

3. (A) What do you mean by GMO ? 2

[2]

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(B) Define Vaccine. 2

(C) Bt cotton. 4

Or

Golden rice or Daffodils genes.

(D) Write a brief note on gene therapy. 12

Or

Write an account on Hybridoma technology.

UNIT-IV

4. (A) What is IPR ? 2

(B) Define patent. 2

(C) Applications of PCR. 4

Or

Patentable subjects matter.

(D) Write in brief about biosafety. 12

Or

Give a brief accounts of rules for export and import of biological materials.

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