

Roll No.

Total No. of Pages : 02

Total No. of Questions : 11

**M.Sc (Medical Microbiology) (Sem-3)**  
**MICROBIAL BIOTECHNOLOGY AND QUALITY ASSURANCE**

**Subject Code : MMB-305-21**

**M.Code : 92529**

**Date of Examination : 13-06-2023**

**Time : 3 Hrs.**

**Max. Marks : 70**

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains EIGHT questions carrying FIVE marks each and students have to attempt any SIX questions.
3. SECTION-C will comprise of two compulsory questions with internal choice in both these questions. Each question carries TEN marks.

**SECTION-A**

**1. Write briefly :**

- a) Application of rDNA technology.
- b) What is the meaning of specific DNA insert?
- c) What is the role of the restriction endonucleas enzyme?
- d) Define genomic library.
- e) Difference between a plasmid vector and a bacteriophage.
- f) What is gene amplification?
- g) Define automation in molecular techniques.
- h) What is a levy-jennings chart?
- i) How specimen collection is done?
- j) Primary contaminant for biohazards.

## SECTION-B

2. How selection of desired recombinant clone is done?
3. Write notes on runaway plasmid and translational fusions.
4. Explain the role of restriction endonuclease and recognizing sequence in gene cloning.
5. Write about cosmid vectors and artificial chromosome vectors.
6. Write down the limitation of PCR in molecular techniques.
7. Write a note on phoenix and vitek 2 in automation.
8. Explain the recommended biosafety levels of infectious agents.
9. Discuss the clinical establishment act standard for medical laboratories.

## SECTION-C

10. Write about the selection of the clone containing specific DNA inserts in rDNA technology.

**OR**

How isolation and identification of the desired gene in gene cloning?

11. Explain IVD regulation, professionalism, ethical responsibilities and code of conduct.

**OR**

Describe in detail the advantages of PCR, RAPD.

**NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.**