

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 : 21-12-22

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.
 - a) Enlist the vector used in recombinant DNA technology.
 - b) What is the meaning of the desired gene in recombinant DNA technology?
 - c) How the production of recombinant protein is done in E. coli?
 - d) Define gene cloning.
 - e) Difference between cosmid and bacteriophage?
 - f) What is a cDNA library?
 - g) Define automation in molecular techniques.
 - h) What is PCR?
 - i) How specimen collection is done?
 - j) Define bio-safety cabinets.

SECTION-B

2. Discuss in detail about selection and insertion of the desired gene into a suitable host.
3. How is the production of recombinant proteins in other microorganisms?
4. Explain the steps involved in gene cloning.
5. Write a note on phagemid vectors and chromosome vectors.
6. Write down the application of polymer chain reaction in molecular techniques.
7. Write a note on Microscan walkaway in automation.
8. Explain In Vitro Diagnostic (IVD) regulations.
9. Discuss the primary contaminant for biohazards?

SECTION-C

10. Write a detailed note on the recombinant DNA technology.

OR

Describe the general modification of cut ends and other enzymes used in gene cloning.

11. Illustrate quality assurance, sample collection, and preservation.

OR

Describe in detail the advantages of RFLP, AFLP.

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.