Roll No.

Total No. of Pages : 02

Total No. of Questions : 11

M.Sc. (Medical Microbiology) (Sem.-2) MEDICAL BIOTECHNIQUES Subject Code : MMB-203-21 M.Code : 92126 Date of Examination : 16-12-22

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. Write briefly :

- a. What are the properties of purines.
- b. Give application of HPLC.
- c. Define chemical shift.
- d. Enlist applications of centrifugation techniques.
- e. What is isoelectric point?
- f. What is hypsochromic shift?
- g. What is the principle of chromatography?
- h. What is the relationship between energy and wavelength?
- i. Define time of flight.
- j. Principle of 2D gel electrophoresis.

SECTION-B

- 2. Write s short note on detection and measurement of radioactivity.
- 3. Explain theory of spin-spin coupling.
- 4. Discuss the different techniques used in sample preparation in IR spectroscopy.
- 5. Elaborate uncommon amino acids and their function.
- 6. Write note on physical and chemical properties of lipids.
- 7. Explain the principle and theory of polyacrylamide gel electrophoresis.
- 8. What are different diagnostic and metabolic studies of radioactive handling?
- 9. Explain the Beer's law in detail with example.

SECTION-C

10. Describe the theory and instrumentation of atomic absorption spectroscopy.

OR

What are the factors affecting the chemical shift in NMR? Describe the instrumentation of NMR.

11. Give principle, working, instrumentation and application of gas chromatography.

OR

Describe factors responsible for deviation from Beer's law in detail.

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