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Total No. of Pages : 02

Total No. of Questions : 11

M.Sc. (Medical Microbiology) (Sem.-1)

**IMMUNOLOGY**

Subject Code : MMB-104-21

M.Code : 91452

Date of Examination : 21-01-2023

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 contains TWO questions. Student has to answer both these questions. Each question carries TEN marks.

**SECTION-A**

**1. Write briefly :**

- a) What are the functions of B cells?
- b) Define ADCC.
- c) Explain antigen-antibody reaction.
- d) What are immune deficiency diseases?
- e) Define cytokines.
- f) Explain classical complement pathway.
- g) Explain the term lymphoid tissues.
- h) What is agglutination reaction?
- i) Define the term peptides
- j) What is hapten?

### **SECTION-B**

2. What are the biological activities of cytokines?
3. Write a short note on hypersensitivity reactions.
4. Explain Western blotting and write its applications.
5. Write a short note on T cell.
6. Discuss about inflammation.
7. Write a short note on complement system.
8. Explain MHC and peptide interaction.
9. What are monoclonal antibodies?

### **SECTION-C**

10. Write a short note on Epitopes.

**OR**

Write a short note on Cytokine therapies

11. Explain Autoimmunity and Cancer.

**OR**

Discuss the Mechanism of antigen-antibody reaction.

**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.**