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H-6821

M.Sc. (II Semester) Examination, 2022

MICROBIOLOGY

Paper – I

(*Immunology*)

Time Allowed: Three Hours

Maximum Marks: 70

Section-A

Note:- Attempt any ten questions. Each question carries one mark.

Q.I. Objective Type Questions **1x10**

1. The antibody having highest valency is.....
2. The T-cells are produced in.....
3. The antibody that can pass the placental barrier is.....
4. HIV mainly attacks.....cells.
5. The first monoclonal antibody to have been approved for therapeutic use is .....
6. The extended form of SCID is.....

7. Type-I Hypersensitivity mainly involves which antibody?
   a) IgD b) IgE
   c) IgM d) IgG
8. RIA have been largely replaced by which of the following technique?
   a) ELISA b) CLIA
   c) Electrophoresis d) Immuno-Blotting
9. The more generalised or non-specific defence against external pathogens is offered by:
   a) Innate defence mechanism
   b) Adaptive defence mechanism
   c) Cell mediated Immunity
   d) None of the above
10. An example of professional antigen presenting cell would be:
    a) Dendritic Cells b) T-Cells
    c) RBCs d) Natural Killer Cells
11. Age of an individual is a significant factor that influence immunosenescence. **(State whether true or false)**
12. B- Cell that has not encountered any antigen is called native B-Cell. **(State whether true or false)**

Section-B

Note:- Attempt any five questions. Each question carries two marks.

Q. II. Very Short Answer Type (25-30 Words) 2x5

1. Write any four of the biological functions of antibodies?
2. Define vaccine.
3. What is an autograft?
4. What is meant by idiotype?
5. Give examples of any four innate barriers.
6. Write any to functions of interferons?
7. What is meant by immunological tolerance?

Section-C

Note:- Attempt any five questions. Each question carries four marks.

Q.III. Short Answer Type (250 Words) 4x5

1. Differentiate between antigenicity and immunogenicity.
2. Describe superantigens with appropriate examples.
3. Give a brief account on Toll-like receptors.
4. Discuss the classical pathway of complement activation.

5. Describe various forms of ELISA in brief.
6. Discuss the factors affecting antigenicity.
7. Give a brief account on hypersensitivity with examples.

Section-D

Note:- Attempt any three questions. Each question carries ten marks.

Q.IV. Essay type (more than 500 Words) 3x10

1. Give a detailed account on mechanisms for generation of antibody diversity.
2. What are cytokines? Discuss the role of cytokines in immune response.
3. Give a detailed account of secondary lymphoid organs and their functions.
4. Describe hybridoma technology in brief. Discuss the applications of monoclonal antibodies.