

G-1/150/22

Roll No.

I Semester Examination, January 2022

M.Sc.

BIOCHEMISTRY

Paper IV

(Biology of Immune System)

Time : 3 Hours]

[Max. Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION A

1×8=8

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. Which type of immune cells are responsible for eradicating intracellular pathogens ?
 - (a) Natural killer cells
 - (b) Mast cells
 - (c) Neurons
 - (d) Specific lymphocytes.

P.T.O.

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2. Which of the following is not a Antigen presenting cell ?
(a) T Lymphocytes (b) B lymphocytes
(c) Dendritic cells (d) Macrophages.
3. Which of these is not a characteristic feature of adaptive immunity ?
(a) Immunogenic memory
(b) Antigen no-specific
(c) Self/non-self-recognition
(d) Diversity
4. Name the cell which receives antigen presented by MHC-II molecule :
(a) Nk cells (b) B-cells
(c) T_h-cells (d) Macrophages.
5. Virus infected cells and cancer cells present antigen to T_c cells through :
(a) MHC I (b) MHC II
(c) MHC III (d) HLA-C
6. Which of these immunoglobulins present in pentameric form ?
(a) IgG (b) IgM
(c) IgA (d) IgE

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7. Mark the correct role of cytosolic T_H-cells :
(a) Help in B-cell activation
(b) Produce cytotoxin
(c) Proliferate T-cell
(d) Kill the target cell
8. Which of the following is a non-organ-specific (systemic) autoimmune disease :
(a) Myasthenia gravis
(b) Systemic lupus erythematosus (SLE)
(c) Hashimoto's thyroiditis
(d) Pernicious anemia.

SECTION B

6×4=24

(Short Answer Type Questions)

Note : Answer the following questions in 250 words.

Unit-I

1. Describe effector and memory immune response.

Or

Describe maturation process of B-cell in lymph node.

Unit-II

2. Describe different activation pathway of compliment system.

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Or

Describe structure and function of T-cell Receptoters.

Unit-III

3. Describe Co-stimulatory Signals.

Or

Describe different typed of interaction between antigen and antibody.

Unit-IV

4. Describe generation of Humoral immune response.

Or

Write short note on Systemic lupus erythematosus.

SECTION C

12×4=48

(Long Answer Type Questions)

Note : *Answer the following questions in 500 words.*

Unit-I

1. Explain structure and functions of primary lymphoid organ.

Or

Describe structure and functions of different types of immune cells.

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Unit-II

2. Explain mechanism of transplantation and rejection of grafts.

Or

Describe structure and function of Immunoglobulin

Unit-III

3. Explain Heptane and super antigens.

Or

Explain mechanism of Recognition of antigens T and B cell.

Unit-IV

4. Explain type-II Hypersensitivity.

Or

Explain mechanism of generation of Cell mediated immune response.

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