18BCP18

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Fourth Semester)

Branch – **BIOCHEMISTRY**

IMMUNOLOGY

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 B and T lymphocytes arise from _____.
(i) hematopoietic stem cells (ii) germ cells
(iii) somatic cells (iv) spermatocytes

2 Major Histocompatibility Complex is a tight cluster of linked_____.
(i) Carbohydrates (ii) Proteins
(iii) Genes (iv) Lipid molecules

3 Name the cytokines which act as a T-cell growth factor?
(i) IL-3 (ii) IL-2
(iii) IL-4 (iv) IL-5

4 Hypersensitivity to an allergen is due to _____.
(i) Food Habits
(ii) Life style
(iii) Improper functioning of the immune system
(iv) Environment

5 HIV-1 is a member of _____ family.
(i) retroviridae (ii) arenaviridae
(iii) filoviridae (iv) flaviviridae

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a. Describe the hematopoietic growth factors.
OR
b. List the clinical uses of stem cells.

7 a. Discuss the properties & characteristics of antigens.
OR
b. Describe the antigenic determinants on immunoglobulin.

8 a. Explain the principle & applications of RIA.
OR
b. Interpret the structure and functions of IL & IFN.

9 a. Illustrate the various immunodeficiency diseases.
OR
b. Outline the active and passive immunization.

10 a. Discuss the immune response to tumors.
OR
b. Describe the destruction of T cells.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a. Elaborate the cloned lymphoid cell lines.

OR

b. Explain the development & differentiation of T cells & B cells.

12 a. Interpret the antigen processing & presentation.

OR

b Illustrate the MHC class I and class II.

13 a. Describe the principle and advantages of fluorescence immunoassay.

OR

b. Elaborate the types & applications of ELISA.

14 a. Discuss the type I and type II hypersensitivity.

OR

b. Explain the autoimmune diseases in humans.

15 a. Discuss the structure of HIV and envelope glycoprotein.

OR

b. Elaborate the bone marrow transplants.

Z-Z-Z END