

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(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. Choose the null cells from the followings
 (i) Lymphokine-activated killer cells (ii) Dendritic cells
 (iii) Platelets (iv) Mast cells
2. Identify the MHC class that appears on all nucleated cells
 (i) Class III MHC molecules (ii) Class IV MHC molecules
 (iii) Class II MHC molecules (iv) Class I MHC molecules
3. Select the component used in RIA that is labeled with isotope for detection
 (i) Antibody (ii) Antigen
 (iii) Enzyme (iv) Substrates
4. Which type of hypersensitivity reaction causes rapid anaphylaxis in response to an allergen?
 (i) Type I (ii) Type II
 (iii) Type III (iv) Type V
5. Find out the correct statement about autoimmunity
 (i) An automatic trigger of the immune system directed against a specific antigen
 (ii) Failure to distinguish between self and non-self
 (iii) An automatic segregation of T and B cells
 (iv) Failure of B cells to interact with T cells

SECTION - B (15 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

- 6 a Analyse the structure of BCR.
 OR
 b State the clinical uses of stem cells.
- 7 a Evaluate MHC organization.
 OR
 b Classify antigens.
- 8 a Narrate the properties and functions of cytokines.
 OR
 b Discuss ELISA.

Cont...

- 9 a Compare active and passive immunization.
OR
b Analyse immunological tolerance.
- 10 a Bring out the mechanism of autoimmunity.
OR
b Sketch the structure of HIV and add note on it .

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Categorise the cells of immune system.
OR
b Justify the role of experimental animal models used to study the immune system.
- 12 a Elucidate the mutigene organisation of Ig genes.
OR
b Discuss the pathways that functions to eliminate intracellular and extracellular antigens.
- 13 a Interpret the immune response to viral and bacterial infections.
OR
b Evaluate the antigen - antibody interactions.
- 14 a Differentiate Type I and Type II hypersensitivity.
OR
b Compare whole organism vaccine and synthetic peptide vaccine.
- 15 a Elaborate on cancer immune therapy.
OR
b Describe the mechanism involved in graft rejection.

Z-Z-Z

END