

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION - MAY 2023
(Fourth Semester)

Branch - BIOTECHNOLOGY

IMMUNOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Small molecules that elicit an immune response only when attached to a large carrier such as protein is
 - (i) Adjuvants
 - (ii) Interferons
 - (iii) Epitope
 - (iv) Haptens
2. The only antibody class that significantly crosses the human placenta is
 - (i) Ig E
 - (ii) Ig G
 - (iii) Ig A
 - (iv) Ig M
3. Activation of naive T lymphocytes is best achieved by _____ antigen presenting cells(APCs).
 - (i) Macrophages
 - (ii) Mast cells
 - (iii) Dendritic cells
 - (iv) Neutrophils
4. BCG is used to prevent
 - (i) Typhoid
 - (ii) Human Immuno Deficiency Virus.
 - (iii) Cholera
 - (iv) Tuberculosis
5. The formation of precipitin arc is found in
 - (i) Agglutination
 - (ii) Blotting
 - (iii) Immunoelectrophoresis
 - (iv) Radio Immuno Assay

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Outline the steps involved in phagocytosis.
OR
b Differentiate primary and secondary immune response.
- 7 a Write a brief note on idiotypes and allotypes.
OR
b Differentiate TCR and BCR.
- 8 a Write a short note on MHC Proteins.
OR
b Comment on Cell mediated immunity.

Cont...

- 9 a Explain briefly about the HIV and its ill effects.
OR
b Classify the types of hypersensitivity reactions.
- 10 a Write about immuno-blotting techniques.
OR
b Mention the significance of immuno-diagnostic kit for bacterial infections prediction.

SECTION - C (30 Marks)

Answer ALL questions

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

- 11 a Classify the different types of antigens.
OR
b Contrast between Primary and secondary immune organs.
- 12 a Outline the differentiation and activation of B-cells.
OR
b Illustrate the structure of immunoglobulins.
- 13 a Discuss in detail about complement system. Add a note on classical pathway of complement.
OR
b Outline the types and functions of cytokines.
- 14 a Explain how the monoclonal antibodies are produced? Write their applications.
OR
b List out and explain the autoimmune diseases.
- 15 a Describe in detail about the ELISA.
OR
b How is blood grouping done in humans? Explain necessary tables.

Z-Z-Z

END