

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Fourth Semester)

Branch – **BIOCHEMISTRY**

BASICS OF IMMUNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- 1 Identify the antibacterial substance present in human milk that fights against *E. coli*
(i) Lactose (ii) Casein
(iii) Lactoferrin (iv) Lactalbumin
- 2 Which of the following is a powerful adjuvant used in experimental animals?
(i) Beryllium sulphate (ii) Endotoxin
(iii) Alum (iv) Freund's Complete adjuvant
- 3 Name the end cells of B lymphocytes.
(i) Plasma cells (ii) Memory cells
(iii) Stem cells (iv) Lymphoblasts
- 4 Label the regulatory T cells from the following cells.
(i) T Helper cells (ii) T Suppressor cells
(iii) T Killer cells (iv) T Delayed Hypersensitivity cells
- 5 Which is the only Immunoglobulin that crosses the human placenta and offers protection in newborn?
(i) IgA (ii) Ig G (iii) Ig M (iv) Ig D
- 6 Mention the type of reaction involved in WIDAL test
(i) Precipitation reaction (ii) Agglutination reaction
(iii) Flocculation reaction (iv) Cytolysis
- 7 Which of the following activates Alternative pathway of complement system?
(i) Gram negative bacteria (ii) Yeast
(iii) Animal viruses (iv) Ag-Ab complex
- 8 Name the technique used to detect virus in biological sample.
(i) RIA (ii) ELISA
(iii) Immunoelectrophoresis (iv) FISH
- 9 Choose the older name of Xenograft.
(i) Autograft (ii) Isograft
(iii) Homograft (iv) Heterograft
- 10 Find the type of autoantibodies formed in Systemic Lupus Erythematosus.
(i) IgG (ii) Ig M (iii) LATS (iv) ANF

Cont...

SECTION - B (35 Marks)Answer **ALL** Questions**ALL** Questions Carry **EQUAL** Marks (5 x 7 = 35)

- 11 a Differentiate between Innate and Acquired immunity.
(OR)
b Summarize on i) Cross reactivity ii) Synthetic antigens.
- 12 a Describe the structure and functions of White blood cells.
(OR)
b Bring out the structure and functions of receptors on the surface of T Lymphocytes.
- 13 a Narrate the mechanism and applications of Agglutination reaction.
(OR)
b Analyze the Type -IV Delayed Hypersensitivity reaction.
- 14 a Explain the Clonal selection theory.
(OR)
b Describe the principle and applications of Fluorescent Antibody Technique.
- 15 a State the types and significance of Vaccines.
(OR)
b Explain the origin, pathogenesis and treatment of Rheumatoid arthritis.

SECTION - C (30 Marks)Answer any **THREE** Questions**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Analyze the structure and functions of Secondary Lymphoid organs.
- 17 Examine Cytokines and their mode of action.
- 18 Elucidate the types, structure and biological functions of Immunoglobulins.
- 19 Outline the Classical pathway of biosynthesis and significance of Complement system.
- 20 Summarize the immunological abnormalities behind AIDS.

Z-Z-Z

END