

2022

ZOOLOGY — HONOURS

Paper : CC-10

(Immunology)

Full Marks : 50

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*Answer *question no. 1* and *any four* questions from the rest.

1. Answer *any five* questions :

(a) What is opsonization?	2
(b) How many polypeptide chains make up MHC class I molecule?	2
(c) What is hypervariable region of immunoglobulin? State its significance.	1+1
(d) What are GALT and CALT?	1+1
(e) Mention the biological functions of complements.	2
(f) State two function of eosinophils.	2
(g) Define lymphokines.	2
(h) What are NK Cells?	2
(i) What do you mean by passive immunization?	2
2. (a) What is complement system?
- (b) Describe the classical pathway of complement activation and MAC formation with diagram.
- (c) What are interferons? 2+(3+2+1)+2
3. (a) What is monoclonal antibody?
- (b) How does HAT medium facilitate selection of B-cell hybridoma?
- (c) State the properties of IgM. Draw a labelled diagram of IgG. 2+3+(2+3)
4. (a) State the major steps involved in the development of inflammation.
- (b) Distinguish between T-Cell and B-Cell.
- (c) Briefly discuss Gell and Coomb's classification of hypersensitivity reactions. 3+3+4
5. (a) Enumerate the role of T_H Cells in B-Cell activation.
- (b) What is prozone effect?
- (c) Cytokines control adaptive immune response by regulating T-Cell activation and functions.— Justify the statement. 3+2+5

Please Turn Over

6. (a) Distinguish between Primary and Secondary Antigen-Antibody interaction.
(b) Differentiate between live attenuated vaccine and subunit vaccine. Give examples.
(c) Describe the structure of MHC-I molecule with diagram. 2+(2+2)+(3+1)
7. (a) What is the basic difference between RIA & ELISA?
(b) Differentiate between humoral and cell mediated immunity mentioning the respective components.
(c) Briefly discuss the events of T-Cell development. 2+4+4
8. Write short notes on (*any four*) : 2½×4
- (a) Hapten
 - (b) Adjuvant
 - (c) Affinity and avidity of antibody
 - (d) Structural organization of lymph node
 - (e) Chemokines
 - (f) Antibody-dependent cell mediated cytokines (ADCC).
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