

M.Sc. 1st Semester Examination, 2024

ZOOLOGY

(Immunology)

PAPER—ZOO-105

Full Marks : 25

Time : 1 hour

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

GROUP – A

1. Answer any *two* questions from the following :
2 × 2
- (a) What are superantigen and haptens ?
- (b) Explain affinity and avidity with example.

(Turn Over)

- (c) Write the properties and functions of B-cell.
- (d) What are the roles of complements in inflammation ?

GROUP – B

2. Answer any *two* questions from the following : 4×2
- (a) What is a Probe ? Write the difference between sequential and conformational epitope.
 - (b) Describe the structure and function of class I MHC molecule with suitable diagram.
 - (c) What is sandwich ELISA ? Explain the procedure and its application.
 - (d) Distinguish between Necrosis and Apoptosis with suitable illustrations.

(3)

GROUP – C

3. Answer any *one* question from the following :

8 × 1

(a) Name two reporter enzymes and their respective chromogenic substrate frequently used in immunohistochemistry (IHC). Illustrate the direct and indirect IHC method with proper diagram. Write the application of IHC.

2 + 5 + 1

(b) Write notes on any *two* :

4 + 4

(i) Antibody Dependent Cell mediated Cytotoxicity (ADCC).

(ii) Haematopoiesis.

(iii) Southern Blotting Hybridization.

(iv) Transcriptional regulation of immunoglobulin gene.

(v) Lectin Pathway of complement.

[Internal Assessment – 5 Marks]

