

Total No. of Printed Pages—3

6 SEM TDC DSE ZOO (CBCS) 3 (H)

2024

(May)

ZOOLOGY

(Discipline Specific Elective)

(For Honours)

Paper : DSE-3

(Immunology)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks :

1×5=5

(a) The primary lymphoid organs involved in immune cell maturation are ____ and ____.

(b) The process by which antibodies bind to pathogens, marking them for destruction, is called ____.

(2)

(c) The specific region on an antigen where an antibody binds is known as _____.

(d) Immunoglobulin responsible for mucosal immunity is _____.

(e) The major histocompatibility complex (MHC) plays a crucial role in _____.

2. Write short notes on (any three) : $4 \times 3 = 12$

(a) Epitopes

(b) Cytokines

(c) Rheumatoid arthritis

(d) Clonal selection theory

3. Distinguish between (any three) : $4 \times 3 = 12$

(a) Active immunity and Passive immunity

(b) Adjuvants and Haptens

(c) Antigenicity and Immunogenicity

(d) Autoimmunity and Immunodeficiency

4. What is RIA? Describe the principle of RIA. Briefly describe the technique of RIA with suitable illustrations. $2+4+6=12$

(3)

Or

Describe the structure of MHC molecule with appropriate illustrations. Explain the different classes of MHC molecules and mention their functions. $6+2+4=12$

5. Describe the endogenous and exogenous pathways of antigen processing and presentation with appropriate illustrations. Highlight the differences between these two pathways in terms of the cellular mechanisms and antigen-presenting cells involved. $5+5+2=12$

Or

What is hybridoma technology? Describe the process involved in generating monoclonal antibodies by hybridoma technology. List the biomedical applications of monoclonal antibodies. $2+8+2=12$
