

B.Sc. 4th Semester (Honours) Examination, 2023 (CBCS)

Subject : Zoology

Course : CC-X

(Immunology)

Time: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates are required to give their answers in their
own words as far as applicable.*

Group-A

1. Answer *any five* questions of the following: 2×5=10
- (a) What is ADCC?
 - (b) Define endotoxins.
 - (c) What is CRP? Mention its functions.
 - (d) Differentiate between primary and secondary immune responses.
 - (e) What is adjuvant? Mention its functions.
 - (f) What is DTP? Define opsonization.
 - (g) What is immune-proteasome?
 - (h) What is the full form of 'MALT'? State its significance.

Group-B

2. Answer *any two* questions of the following: 5×2=10
- (a) Outline the general mechanism of Type-I hypersensitivity reaction.
 - (b) Write a short note of cytosolic pathway of antigen presentation.
 - (c) Differentiate CD4⁺ and CD8⁺ cells. What are APCs? State the functions of MAC. 2+2+1
 - (d) What are PAMPs? Give examples. Define hypersensitivity. 3+2

Group-C

3. Answer *any two* questions of the following: 10×2=20
- (a) What is 'macrophage activation'? How do 'activated' macrophages differ from non-activated macrophage? Write a note on dendritic cells. 2+3+5
 - (b) Draw and describe the basic structure of IgG. Give a brief account of positive and negative selection of thymocytes in thymus. 6+4
 - (c) Describe the molecular structure of MHC I and mention its important functions. Compare and contrast B-cell and T-cell epitope. 5+5
 - (d) Discuss the advantages and disadvantages of DNA vaccine. 5+5