



B.Sc./4th Sem (H)/ZOO/24(CBCS)

2024

4th Semester Examination

ZOOLOGY (Honours)

Paper : C 10-T

(Immunology)

[CBCS]

Full Marks : 40

Time : Two Hours

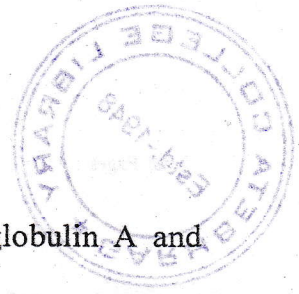
*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

Group - A

Answer any *five* questions :  $2 \times 5 = 10$

1. State the difference between monoclonal and polyclonal antibody.
2. Mention two examples of passive immunization occurring naturally in an individual.
3. What is human leukocyte antigen (HLA)?
4. What is erythroblastosis fetalis?
5. Mention an example each for cytokine antagonism and cytokine synergism.

P.T.O.



6. What is Ghon complex?
7. Mention the functions of immunoglobulin A and immunoglobulin E.
8. What is membrane attack complex (MAC)?

### Group - B

Answer any *four* questions : 5×4=20

9. Describe the cytosolic pathway of antigen processing and presentation with illustration. 5
10. Mention the forces involved in antigen-antibody interactions. State the significance of prozone effect in antigen-antibody interactions. 3+2
11. What are attenuated vaccines? Mention the advantages and disadvantages of attenuated vaccine. 2+3
12. What might be the immunological problems associated with second time infection of Dengue? 5
13. Mention the different roles of macrophages in providing immunity to an individual. 5
14. Mention the physical and chemical characteristic of an immunogen. 5

( 3 )

**Group - C**

Answer any *one* question :

10×1=10

15. Explain how the innate and adaptive immune system are interdependent. Describe the structure of the lymph node citing appropriate illustration. 5+5
16. Draw and describe the structure and function of MHC I molecule. What are adjuvants? Comment on the significance of positive selection and negative selection in T cell maturation. 4+2+4
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