2023

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 : 2×5=10

1. State the primary components of HAT media in monoclonal antibody generation technique.
2. Mention the demerits of inactivated vaccine.
3. Classify the hypersensitivity reactions after Gell and Coombs' method.
4. What is T cell anergy?
5. What is passive immunization? Give example.

P.T.O.

6. Compare B cell and T cell specific epitopes.

7. Why the hinge region of an immunoglobulin molecule has high concentration of proline and cystine?

8. What are superantigens? Give example.

Group - B

Answer any ***four*** questions : 5×4=20

9. Describe the endocytic pathway of antigen processing and presentation with proper illustration. 5

10. Draw and describe the T cell receptor (TCR) complex. 5

11. Why it is essential to administer three or more doses of Polio vaccine for proper immunization against the virus? What are the different routes of vaccination? 2+3

12. Comment on the immune evasion strategies of *Plasmodium falciparum*. 5

13. State the types of cytokine reaction observed in immune system. 4+1

14. Explain with illustration the reason behind vigorous immunogenic response during secondary infection by a pathogen. 3+2

Group - C

Answer any ***one*** question : 10×1=10

15. Explain with illustration the method involved in detection of an antigen using indirect ELISA. State the significance of complement activation in immune system. What is immunotoxin? 4+4+2

16. Draw and describe the structure of MHC II molecule. Explain the statement — "All immunogens are antigens but all antigens are not immunogens". How does a natural killer (NK) cell destroy a virus infected cell? 4+2+4
