

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FIFTH SEMESTER EXAMINATION, FEBRUARY 2022

THIRD YEAR [BATCH 2019-22]

ZOOLOGY (HONOURS)

PAPER : XI [CC11]

Date : 26/02/2022

Time : 11 am – 1 pm

Full Marks : 50

Answer all the questions:

Group A

1. a) How does the classical pathway differ from the alternative pathway of complement activation?
b) What is MAC-formation in complement activation?
c) What are chemokines? (2+2+1)
2. a) What are Attenuated live vaccines?
b) Mention the events involved in Type-1 hypersensitive reactions.
c) What are TNFs? Mention their cellular functions. (1+2+2)
3. a) Can immunocompromised persons get vaccinated? Explain your view.
b) What are the different self-tolerance mechanisms in immune system?
c) Comment on the nature of immunodeficiency in AIDS. (2+2+1)

Group B

4. a) How cholera results into profuse dysentery?
b) Describe the stages of advancements in liver cirrhosis?
c) Define Bronze Diabetes. (2+2+1)
5. a) How could you characterize rheumatoid arthritis being an autoimmune disease?
b) Differentiate between case-control study and cohort-based study in epidemiology.
c) Define 'dependency triangle' in epidemiology. (2+2+1)
6. a) Describe pathogenicity of *Schistosoma* with special reference to immune escaping.
b) With a flowchart, mention the steps of dengue virus transmission life cycle.
c) Define zoonotic disease. (2+2+1)

Group C

7. a) Define ADCC.
b) What is M-cell?
c) Write down the difference between innate immunity and adaptive immunity.
d) What is secondary immune response? (1+1+2+1)

8. a) Draw a labelled diagram of immunoglobulin.
b) Describe the role of CD3 complex.
c) What is superantigen? (2+2+1)
9. a) What is the significance HAT selection in Hybridoma Technology?
b) Briefly describe the exogenous pathway of antigen processing and presentation. [1+(3+1)]
10. a) What do you mean by positive and negative selections regarding T-cell development?
b) What is a superantigen?
c) Why an adjuvant is used in the preparation of vaccine? (2+1+2)

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