

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FIFTH SEMESTER EXAMINATION, MARCH 2021

THIRD YEAR [BATCH 2018-21]

ZOOLOGY (HONOURS)

PAPER : V

Date : 13/03/2021

Time : 11 am – 1 pm

Full Marks : 50

Answer all the questions:

Group - A

1. How the endocytic pathway of antigen processing and presentation differs from the cytosolic pathway? (5)
2. a) What is the role of MHC in regulating the immune responsiveness? (3)
b) What is the necessity of the MHC to exhibit polymorphic property? (2)
3. Illustrate with example the importance of shifting balance between the pro- and anti-inflammatory cytokines in our physiological system. (5)

Group - B

4. a) How does cholera toxin cause diarrhea (molecular mechanism)? (2)
b) Mention the clinical manifestations and prevention of liver cirrhosis. (2)
c) What are the sites of infection seen in *Ancylostoma duodenale*? (1)
5. a) Comment on the parasitic adaptations of *Schistosoma hematobium*? (2)
b) What are the causes of rheumatoid arthritis? (2)
c) Define PKDL. (1)
6. a) State the characteristic features of mosquito cycles seen in dengue. (2)
b) Mention the cause and pathological outcomes of Wilson's disease. (2)
c) Narrate the significance of CPS in amoebiasis. (1)

Group - C

7. a) Define MALT and GALT. (2)
b) What is M-cell? (1)
c) What are the functions of NK cell? (2)
8. a) Compare antigenicity and immunogenicity. (2)
b) What are epitope and agretope? (2)
c) State the functions of adjuvant. (1)
9. a) Illustrate the structure of an immunoglobulin with a suitable diagram. (2+2)
b) What is superantigen? (1)

10. a) Explain the significance of HAT medium in Hybridoma technology. (2)
- b) What is toxoid? Give an example. (1)
- c) Write down the merits and demerits of passive immunization. (1+1)

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