



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 4th Semester Examination, 2020

**ZOOACOR10T-ZOOLOGY (CC10)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

1. Answer any **eight** questions from the following: 2×8 = 16
- (a) What is passive immunity?
  - (b) What are epitope and paratope?
  - (c) What is cytokine? Write its function.
  - (d) Differentiate between primary and secondary lymphoid organs.
  - (e) What is adjuvant? Give example.
  - (f) How does sickle cell protect against malaria?
  - (g) Compare between antigen and immunogen.
  - (h) State the role of mast cells in immunity.
  - (i) What do you mean by professional and non-professional antigen presenting cells?
  - (j) Mention the source and function of the Tumour Growth factor.
  - (k) What is APC? Give examples.
  - (l) What is Autoimmune disorder? Give example.
  - (m) Write the full form of AIDS. Why is it so called?
  - (n) What is cluster of differentiation?
2. Answer any **three** questions from the following: 3×3 = 9
- (a) Distinguish between T-cell and B-cell. 3
  - (b) What is active and passive immunization? Cite example. 2+1
  - (c) Mention the sources and functions of IL-4, IL-12 and IFN-gamma. 1.5+1.5
  - (d) How do tumour cells escape immune system attack? 3
  - (e) What is innate immunity? Briefly describe the components of the innate immune system. 1+2
  - (f) What are MHC molecules? Differentiate between class I and class II MHC? 1+2

3. Answer any **three** questions from the following: 5×3 = 15
- (a) What is immunoglobulin? Describe briefly the structure of an immunoglobulin molecule with a neat diagram. 1+4
  - (b) What is Membrane Attack Complex (MAC)? State its role in cell lysis. 2+3
  - (c) What do you mean by hypersensitivity? State the sequence of events in a typical type I hypersensitivity reaction. 2+3
  - (d) State the principle and applications of ELISA technique. 2+3
  - (e) What do you mean by vaccination? Differentiate between active and passive immunization. 2+3
  - (f) Briefly explain the exogenous pathway of antigen presentation. 5

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam / university / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

— x —

