

Roll No. ....

## **ZO-551**

### **Immunology**

M. Sc. Zoology (MSCZO-12)

Second Year, Examination, 2018

**Time : 3 Hours**

**Max. Marks : 80**

**Note :** This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Learners are required to attempt the questions contained in these Sections according to the detailed instructions given therein.

#### **Section-A**

##### **(Long Answer Type Questions)**

**Note :** Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. What is Immunoglobulin ? Explain its structure with function.
2. Justify "There exist a T-cell population that functions as immunoregulatory cell."
3. Explain the role of IL-1 in pyrogenesis.
4. How tumors escape host immune mechanism ?

**(B-73) P. T. O.**

**Section-B****(Short Answer Type Questions)**

**Note :** Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. Write a short note on the Super Antigens.
2. Write a short note on the Hemolytic Plaque Assay.
3. Write a short note on the kinetics of antigens antibody reaction.
4. What is a basic difference between CD 4 and CD 8 cells ?
5. What is the side effect of cancer chemotherapy ?
6. What is the use cell line in functional assays of cytokines.
7. Discuss the primary and secondary immune responses ?
8. Discuss on the properties of human classes one and second MHC protein.

**Section-C****(Objective Type Questions)**

**Note :** Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory.

1. Antibodies are :  
(a) Proteins

- (b) Glycoproteins
  - (c) Carbohydrates
  - (d) Nucleic acid
2. Light chain and heavy chain are joined by :
- (a) covalent bond
  - (b) hydrogen bond
  - (c) disulphide bond
  - (d) ionic bond
3. The ability of antigen to stimulate antibody production is called :
- (a) affinity
  - (b) antigen city
  - (c) elicitation
  - (d) None of these
4. Majority of autoimmune disease is :
- (a) cell mediated
  - (b) antibody mediated
  - (c) macrophage mediated
  - (d) mast cell mediated
5. HIV attack :
- (a) T-Helper cell
  - (b) T-Cytotoxic cell
  - (c) B-cell
  - (d) Macrophage

Fill in the blanks :

6. The ..... reaction can be used to estimate the amount of antigen in a given sample.
7. Binding of antibody to the cell surface antigen can be detected by cell.....
8. Incomplete ..... adjuvant is water in oil emulsion.
9. .... cell can then bind to the antigen/MHC complex.
10. The stimulation of antigen specific T-cell by appropriated presented antigen alone result in.....