

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2019

Subject Name: Immunology

Subject Code: 4SC05IMM1

Semester: 5

Date: 19/03/2019

Branch: B.Sc. (Microbiology)

Time: 10:30 To 01:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1 **Attempt the following questions:** **(14)**

- a) Define antigen
- b) Define immunity
- c) Define allergy
- d) Define affinity
- e) Expand MHC
- f) Name secondary lymphoid organs
- g) Define adaptive immunity
- h) Antigen can be proteins .True/False
- i) Generally antibodies produced against a pathogen are polyclonal. True/False
- j) B cells and T cells are involved in adaptive immunity. True/False
- k) Any molecule that induces or elicits an immune response are.....
- l) Any substance or molecules that interact with antibodies are called.....
- m) Humoral immunity is also called as.....
- n) Origin and maturation of B cells takes place at.....

Attempt any four questions from Q-2 to Q-8

Q-2 **Attempt all questions** **(14)**

- (a) Illustrate diagrammatically the structure of MHC class I. **(7)**
- (b) Describe the importance of antigen processing and presentation during an immune response. **(7)**

Q-3 **Attempt all questions** **(14)**

- (a) Enumerate the advantage of using monoclonal antibodies as compared to polyclonal antisera. **(7)**
- (b) What is immunity? Explain different types of immunity and their significance. **(7)**

Q-4 **Attempt all questions** **(14)**

- (a) Describe the working principle of precipitation immunological techniques. **(7)**
- (b) Explain the role played by the following immune system **(7)**
 - 1)Mast cell
 - 2)Macrophages



- Q-5 Attempt all questions (14)**
- (a) What do you understand by the term autoimmunity? Explain its different types with the help of examples. (7)
 - (b) Define immunoglobulin. Explain any one type of immunoglobulin with help of labelled diagram. (7)
- Q-6 Attempt all questions (14)**
- (a) Give the significance of ELISA as an immunotechnique (7)
 - (b) Write an essay on antigen determinants on antibodies. (7)
- Q-7 Attempt all questions (14)**
- (a) Discuss in detail the mechanism of natural killer cell. (7)
 - (b) Give an account of the T cells of the immune system. (7)
- Q-8 Attempt all questions (14)**
- (a) Write an essay on the contribution of Edward Jenner and Karl Landsteiner in the development of immunology. (7)
 - (b) Describe the any one pathway of complement system with help of diagram. (7)

