

**C. U. SHAH UNIVERSITY**  
**Winter Examination-2021**

**Subject Name : Immunology**

**Subject Code : 4SC05IMM1**

**Branch: B.Sc. (Microbiology)**

**Semester: 5**

**Date: 17/12/2021**

**Time: 11:00 To 02:00**

**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.

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

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|--|----|
| a) Define:-Immunology.   | 01 |
| b) Any molecule that induces or elicits an immune response are.....  | 01 |
| c) Which cell is a type of white blood cell that can kill tumor cells or cells infected with a virus?            | 01 |
| d) What is difference between T cell and B cell?   | 01 |
| e) What is the function of complement?   | 01 |
| f) What is MHC in immunology?  | 01 |
| g) Give the full form of MHC.  | 01 |
| h) SCID is often called “bubble boy disease . T/F  | 01 |
| i) Define- Allergens.  | 01 |
| j) Which Ab is the predominant immunoglobulin in human milk?   | 01 |
| k) Write down the shape of Antibody.   | 01 |
| l) Study of Immune system called -----.  | 01 |
| m) Antibody molecules to carry out their dual functions: antigen binding and biological activity mediation. T/F. | 01 |
| n) What is Hypersensitivity?   | 01 |

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

**Q-2 (14)**

What do you understand by Complement system? Describe the classical pathway of complement system.

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

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|--|----|
| (a) Discuss in detail about Immunodiffusion.                             | 07 |
| (b) Write an essay on characteristics of an antigen molecule.(Any three) | 07 |

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

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|--|----|
| (a) Write a detail note on types of Antibodies(Any four) | 07 |
|--|----|



- (b) Explain the role played by the following immune system  
Neutrophil, Eosinophil, Basophil **07**
- Q-5** **Attempt all questions** **(14)**
- (a) Explain the generation of Humoral Immune Response. **07**
- (b) What exactly is Cancer? Discuss the various therapies available for  
treatment of cancer.(Any three) **07**
- Q-6** **Attempt all questions** **(14)**
- (a) Describe the working principle of Flow cytometry immunological  
techniques. **07**
- (b) Write a short note on the contributions of any two scientists to the field  
of immunology **07**
- Q-7** **(14)**
- Define: - Autoimmunity. Briefly write down its different types with the  
help of examples.
- Q-8** **Attempt all questions** **(14)**
- (a) Discuss the following immuneodeficient diseases: **07**
- i) DiGeorge syndrome
- ii) Chediak- Higashi syndrome,
- (b) Describe the endocytic pathway for antigen processing and presentation. **07**

