Enrollment No:	Exam Seat No:

C. U. SHAH UNIVERSITY

Winter Examination-2022

Subject Name: Immunology

Subject Code: 5SC03IMM1 Branch: M.Sc. (Microbiology)

Semester: 3 Date: 23/11/2022 Time: 11:00 To 02:00 Marks: 70

Instructions:

- (1) Use of Programmable calculator and 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.

SECTION - I Q-1 **Attempt the Following questions** (07)**a.** What is Cancer? 01 **b.** What is Central Tolerance? 01 **c.** Which antibody is available in Tear? 01 **d.** T cell Mature in -----. 01 e. Enlist the type of Complement Pathway. 01 **f.** Give the full form of MHC. 01 **g.** Which enzymes are used to labelled antibody in ELISA. 01 **Q-2** Attempt all questions (14)**a** Write a detail note on B-cell maturation in bone marrow. **07 b** Write a detail note on Innate Immunity. **07** OR **Q-2 (14)** What do you understand by Complement system? Write a detail note on Classical complement pathway. Q-3 Attempt all questions **(14) a** Write a brief note on Hybridoma Technology. **07 b** Write in detail about antigenic determinants on antibodies **07** OR Attempt all questions Q-3 **(14)** a Write a brief note on Nude mouse. **07**



b Write a brief note on types of antibodies.

07

SECTION - II

Q-4		Attempt the Following questions	(07)
	a.	Which technique is used to produce Monoclonal Ab?	01
	b.	Give the examples of Antigen.	01
	c.	What is Autoimmunity?	01
	d.	What is the role of Phagocytic cell?	01
	e.	What is Western Blotting?	01
	f.	Which complement activation pathway is not depend upon antigen - antibody interaction?	01
	g.	Example of Primary Immune Organ.	01
Q-5		Attempt all questions	(14)
	a	Write a brief note on Abzyme.	07
	b	Give the detail about immunoelectron microscopy.	07
		OR	
Q-5		Attempt all questions	(14)
	a	Write a detail note on DiGeorge syndrome.	07
	b	What is the full form of ELISA? write it in detail.	07
Q-6			(14)
		Write a detail note on Autoimmune disease.	
		OR	
Q-6		Attempt all Questions	(14)
	a	Discuss about Bone marrow.	07
	b	Write a short note on the contributions of any two Scientists to the field of immunology.	07

