D 9	1637	(Pages : 2)	Name
			Reg. No
,	THIRD SEMESTER M.S	Sc. DEGREE EXAMINATI	ON, DECEMBER 2015
		(CUCSS)	
		Biotechnology	
		GB 3C 4—IMMUNOLOGY	
Time : Three Hours		Maximum : 36 Weightage	
		Section A	Mamman . 00 Weightage
	E	Answer all questions. ach question carries 1 weightage.	
1.	What do you mean by hevy c	hains of Ig?	
2.	What are CD8 T cells ?		
3.	Give the significance of HAT medium.		
4.	What is Graft rejection?		
5.	What are tumor antigens?		
6.	List the important functions of interferons.		
7.	Differentiate between passive and active immunity.		
8.	. What are histamines?		
9.	What is the role of macropha	ages in immunity?	
10.	What do you mean by precip	itation reaction?	
			(10 x 1 = 10 weightage)
		Section B	
	E	Answer any seven questions. ach question carries 2 weightage.	
11.	Give the principle of ELISA. With the help of figures describe the types of ELISA.		
12.	How does autoimmunity affect thyroid gland?		
13.	Briefly explain the typical structure of antibody.		
14.	Discuss the important properties of antigens.		
15.	What are oncogenes? How ca	an they induce cancer?	
16.	Comment on the applications	s of MAb.	

17. Which are the defense mechanism against bacterial infections?

18. Describe the mechanism of graft rejection.

Turn over

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- 19. Give the signficance of class **II** MHC.
- 20. Discuss the regulation of Immune response.

 $(7 \times 2 = 14 \text{ weightage})$

Section C

Answer any **two** questions. Each question carries 6 weightage.

- 21. Explain the treatment approaches towards hypersensitivity reactions. Add a note on the types of hypersensitivity reactions.
- 22. Discuss the different techniques based on antigen antibody interactions.
- 23. Give a description on primary and secondary lymphoid org

 $(2 \times 6 = 12 \text{ weightage})$