	Utech
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Invigilator's Signature :	

# CS/M.Sc (GE)/SEM-3/MSGEN(ABT)-305B/2012-13 2012

## **IMMUNOTECHNOLOGY**

Time Allotted :  $1\frac{1}{2}$  Hours Full Marks : 35

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

### **GROUP - A**

## ( Multiple Choice Type Questions )

- 1. Choose the correct alternatives for any five of the following :  $5 \times 1 = 5$ 
  - i) A major disadvantage of attenuated vaccines is the possibility
    - a) because of their capacity for transient growth
    - b) of provide prolonged immune-system exposure to the individual epitopes on the attenuated organisms
    - c) that they will revert to a virulent form
    - d) none of these.
  - ii) MHC class I genes are all of the following except
    - a) HLA-A

b) HLA-C

c) HLA-D

d) HLA-E.

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.SC	(GE)/	3EM-3/M3GEN(AD1)-303.	D/ &U I	12-13		
iii)	Which class of antibody found on the surface of foe cells is detected by a Coombs test?					
	a)	IgM	b)	IgG		
	c)	IgD	d)	IgE.		
iv)	The ability of a single <i>B</i> cell to express both IgM at IgD molecules on its surface at the same time is mat possible by					
	a)	isotype switching				
	b)	allelic exclusion				
	c)	alternative RNA splicing	ng			
	d)	use of genes from bot	h par	ental	chromosomes.	
v)	MHC class 1 molecules are important for which of t following?					
	a)	Binding to CD8 molec	ule o	n T ce	11	
	<ul><li>b) Binding to CD4 molecule on T cell</li><li>c) Binding to Ig on B cell</li></ul>					
	d)	None of these.				
vi)	Complement is required for					
	a)	lysis of erythrocytes b	y the	enzyı	me lecithinase	
	b)	NK mediated lysis of t	umou	ır cell	s	
	c)	Phagocytosis				

d)

antibody mediated lysis of bacteria.



### **GROUP - B**

# (Short Answer Type Questions)

Answer any three of the following.

- $3 \times 5 = 15$
- 2. Write short notes on interleukin-12.

- 3 + 2
- 3. Define *M* cells? What role does a *M* cell play in inducing mucosal immunity.
- 4. What is the difference between primary and secondary immune responses?
- 5. What is missing cell hypothesis? Are NK cells part of innate or adaptive immunity? 2 + 3
- 6. Give a short account of radioimmunoassay.

### **GROUP - C**

### (Long Answer Type Questions)

Answer any one of the following.

 $1 \times 15 = 15$ 

- 7. Discuss the immune complex mediated hypersensitivity with proper example. Describe various therapeutic strategies for autoimmune disorders.  $7\frac{1}{2} + 7\frac{1}{2}$
- 8. What are interferons? Mention the different types of interferon. How do interferons participate in signal transduction? What are the main features of interferon therapy? 2+3+5+5
- 9. Write down the mode of action of DNA vaccine. Why the clonal selection of T cells are necessary for a healthy immune system?  $7\frac{1}{2} + 7\frac{1}{2}$

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