



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.TECH/BT(O)/SEM-5/BT-501/2012-13**

**2012**

**IMMUNOLOGY**

Time Allotted : 3 Hours

Full Marks : 70

*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 *ten* of the following :

10 × 1 = 10

- i) The predominant type of leucocyte in the blood is
  - a) monocyte
  - b) eosinophil
  - c) basophil
  - d) neutrophil.
- ii) B2 microglobulin is an integral part of
  - a) IgM
  - b) MHC class II
  - c) MHC class I
  - d) TCR.
- iii) The form of microphage lining the sinuses of the liver is the
  - a) Histiocyte
  - b) Kupffer cell
  - c) Monocyte
  - d) Astrocyte.
- iv) The CD4 molecule is a
  - a) heterodimer
  - b) receptor for class II MHC
  - c) part of BCR
  - d) complement receptor.



- v) Molecules in the *Ig* superfamily share
- a) Ag-binding sites
  - b) domains
  - c) variable regions
  - d) peptide residues.
- vi) A hybridoma is a cell formed by the fusion of
- a) *T* cell with a myeloma cell
  - b) macrophage with a myeloma cell
  - c) *T* cell with a *B* cell
  - d) plasma cell with a myeloma cell.
- vii) The major clinical problem associated with bone marrow transplants is
- a) contact dermatitis
  - b) allograft rejection
  - c) graft arteriosclerosis
  - d) graft-versus-host disease.
- viii) A suitable organism for use in recombinant vaccines is
- a) influenza virus
  - b) smallpox virus
  - c) poliomyelitis virus
  - d) vaccinia virus.
- ix) A molecule for encountering viral infection is
- a) Macrophage
  - b) Kupffer cells
  - c) Interferons
  - d) Chemokines.
- x) Complement is a protein present in
- a) brain
  - b) liver
  - c) serum
  - d) kidney.
- xi) Antiglobulins are
- a) incomplete antibodies
  - b) antibodies against immunoglobulins
  - c) complement-fixing antibodies
  - d) agglutinating antibodies.



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9. Write short notes on any *three* of the following :  $3 \times 5$
- a) Radio immunoassay
  - b) DNA vaccine
  - c) Antibody affinity and antibody avidity
  - d) Class switching
  - e) Immediate hypersensitivity.
10. a) Define the following :
- Isograph, Allograft, Xenograft, Autograft.
- b) Discuss the role of helper *T* cells in graft rejection.
  - c) Discuss briefly the principle of HLA typing.
  - d) Write short account on Graft Versus Host Disease (GVDH).  $(4 \times 1) + 5 + 2 + 4$

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