

**III B.Tech. II Semester Regular Examinations, April/May -2005**

**IMMUNOLOGY**

**(Bio-Technology)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions  
All Questions carry equal marks**

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1. What are the various cells involved in the immune response and explain about their role in immune response.
2. Define immunoglobulin and explain about its structure and function.
3. Write a short notes on:
  - (a) Haplotypes
  - (b) HLA genes
  - (c) H-2 genes
  - (d) Polygenic
4. (a) What Macrophages and what is its role in cell mediated immunity.  
(b) What are langerhance cells and what is its role in cell mediated immunity.
5. Describe the differences between general and specific immunosuppressive therapies?
6. Explain different types of antigen-antibody interactions?
7. Explain the blood transfusion mechanism in detail?
8. Give an account on the significance of autoimmunity in Immunology?

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1. Explain any two
  - (a) adjuvants
  - (b) complement
  - (c) MHC
  - (d) T cells
2. Define immunoglobulin and explain about its structure and function.
3. What are monoclonal antibodies and explain its importance ?
4. What is meant by cell mediated immunity and explain about the different components involved in it.
5. Give an account on immunosuppressive therapy?
6.
  - (a) Give an account on the properties of cytokines?
  - (b) Discuss the functions of cytokines in detail?
7. Give an account on type I hypersensitivity?
8. Define autoimmunity and explain with suitable examples?

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1. Explain any two
  - (a) adjuvants
  - (b) complement
  - (c) MHC
  - (d) T cells
2. Write a short notes on :
  - (a) IgG
  - (b) IgA
  - (c) VH regions
  - (d) Antibody valence
3.
  - (a) Name the test which is employed in detection of typhoid fever.
  - (b) Explain in brief the different types of Ag-Ab interactions?
4. Discuss about various types of cell mediated defence mechanism.
5. Explain the significance of stem cells in Immunology and their role in transplantation stem cells and explain their role in transplantation?
6. Explain different types of antigen-antibody interactions?
7. Define active immunization & describe the process for designing vaccines for active immunization?
8. Give an account on the significance of autoimmunity in Immunology?

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1. What are the various organs involved in the immune system.
2. Explain about gene regulation in anti body production
3. (a) Describe in brief about the Human MHC class I genes and explain about their functions.  
(b) Describe in brief about Human MHC class II genes and explain about their role
4. What are interferons and explain about various types of cytokines .
5. Define hybridoma and explain monoclonal antibody production?
6. Explain different types of antigen-antibody interactions?
7. Explain the  $T_{DTH}$  -mediated hypersensitivity in detail?
8. Give an account on the significance of autoimmunity in Immunology?

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