

**III B.Tech II Semester Supplementary Examinations,
November/December 2005
IMMUNOLOGY
(Bio-Technology)**

Time: 3 hours

Max Marks: 80

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

1. What are the various cells involved in the immune response and explain about their role in immune response. [3+13]
2. Write a short notes on :
 - (a) antigen receptors. [8+8]
 - (b) VL regions.
 - (c) VH regions.
 - (d) Hinge region.
3. What are monoclonal antibodies and explain its importance ? [12+4]
4. Explain the process of regulation cell mediated immunity and what is the role of cytokines in it. [8+8]
5. (a) Define HAT medium and explain its role in hybridoma technology? [2+6]
(b) Give an account on the advantages of hybridoma technology? [8]
6. (a) Give an account on the properties of cytokines? [8+8]
(b) Discuss the functions of cytokines in detail?
7. Give an account on type I hypersensitivity? [16]
8. Give an account on the significance of autoimmunity in Immunology? [16]

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1. What is meant by complement and explain in detail the different pathways of complement system? [3+13]
2. Discuss about the B cell mediated immunity and explain about the basic structure of Immunoglobulin. [8+8]
3. What is meant by Idiotypic antibodies and explain their role. [11+5]
4. (a) What Macrophages and what is its role in cell mediated immunity. [8+8]
(b) What are langerhance cells and what is its role in cell mediated immunity.
5. Explain the process of formation and selection of hybrid cells? [10+6]
6. Explain different types of antigen-antibody interactions? [16]
7. Define vaccine and describes different types of vaccines? [2+14]
8. Describe different types of systemic autoimmune diseases and explain in detail about anyone of them? [4+12]

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1. What is meant by immunity and explain about the various components involved in the immune system. [4+12]
2. Discuss about the different classes of immunoglobulin and explain about their role in Immunity. [8+8]
3. What are monoclonal antibodies and explain its importance ? [12+4]
4. What is meant by cell mediated cytotoxicity and explain about role in immune response. [8+8]
5. Explain the process of formation and selection of hybrid cells? [10+6]
6. (a) Give an account on the properties of cytokines? [8+8]
(b) Discuss the functions of cytokines in detail?
7. Give an account on Immune complex-mediated hypersensitivity? [16]
8. Explain different animal models for autoimmune diseases? [16]

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1. (a) What is meant by innate immunity and explain about its importance in newly born baby. [3+5+8]
(b) Explain about the acquired immunity.
2. Explain about gene regulation in anti body production. [16]
3. (a) What is the diagnostic method of shigella and list out the other applications of it? [5+3]
(b) Explain the diagnostic method of diphtheria and list its other applications. [5+3]
4. What is meant by cell mediated immunity and explain about the different components involved in it. [8+8]
5. Explain about immunosuppression in detail along with an example. [12+4]
6. Explain different types of forces that causes antigen - antibody interactions? [16]
7. Discuss the consequences and regulation of type I hypersensitivity? [16]
8. Give an account on the significance of autoimmunity in Immunology? [16]
