

B. Sc.(Biotech.)-II Year

**NS-3468**

**B. Sc. (Biotechnology) Examination, May 2016**

**IMMUNOLOGY AND IMMUNOTECHNOLOGY**

**(B-205)**

**(New)**

*Time : Three Hours]*

*[Maximum Marks : 50*

*Note : Attempt any five questions. All questions carry equal marks.*

What do you mean by live and killed vaccines? How can these vaccines work for eradicating the disease? 10

What is hybridoma technology? Describe the production and purification of monoclonal antibodies. 10

3. Give an account of role played by any three of the following with respect to innate immunity: 10

(i) Macrophages

(ii) Natural killer cell

(iii) Mast cell.

4. What is difference between humoral and cell mediated immunity (CMI)? Describe clonal selection theory. 10

5. Write notes on any two of the following: 2×5=10

(i) ELISA

(ii) RIA

(iii) IRMA.

6. Write a note on organization of class I and II MHC genes and give the structure of MHC molecule. 10

(3)

7. What are antigenic determinants on immunoglobulins ?

Give an account of each type i.e. isotype, idiotype and allotype. 10

8. Write notes on any two of the following:  $5 \times 2 = 10$

(a) B-lymphocyte

(b) T-lymphocyte

(c) Macrophages.

9. Define antigen and antigenicity. Write briefly a classification of antigen. 10

10. Write an essay on "autoimmune disease", explain it with the example of any one disease. 10