

D 1595

Name.....

Reg. No.....

AIIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2009

General Biotechnology

GBT 214—IMMUNOLOGY

Time Three Hours

Maximum : 80 Marks

Section A

Answer any two questions.

1. Explain the genetic basis of antibody diversity.
2. Explain the mechanism, consequences and therapy of **IgE** mediated hypersensitivity reaction.
3. Enumerate and explain the biological properties of **IgG**.

(2 x 10 = 20 marks)

Section B

4. Describe the functions of subsets of T-cells.
5. Explain the **humoral** immunity against viral infections.
6. Explain *in vitro* production of monoclonal antibodies.
7. Explain the role of **cytokines** immune regulation.
8. What are the features of ideal antigen ?
9. Elucidate **MHC** restriction phenomenon.
10. Draw and explain the cross-section of spleen.
11. Explain positive and negative selection.
12. Give an account on lymphocyte trafficking.
13. Explain the interactions between innate and acquired immunity.
14. 'Classical complement pathway is **phylogenetically recent**'—Discuss.
15. Explain gel based **precipitation** reactions.

(10 x 5 = 50 marks)

Section C

16. What is the role of **BCR** and **TCR** ?
17. What are super antigens ?
19. Give examples for **anaphylotoxins**.
20. Comment on the molecular aetiology of rheumatoid arthritis.
21. Name the **APCs**.

(5 x 2 = 10 marks)