

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, FEBRUARY 2008

General Biotechnology

GBT 214—IMMUNOLOGY

Time: Three Hours Maximum: 80 Marks

Section A

Answer any **two** questions. Each question carries 10 marks.

- 1. Write an account on "Built in Barriers".
- 2. What is the role of T cells in CMI response? Explain.
- 3. What are antigen processing and presenting cells ? How do they help in defense mechanism of host ?

 $(2 \times 10 = 20 \text{ marks})$

Section B

Answer any **ten** questions. Each question carries 5 marks.

- 4. Differentiate between Natural and Artificial immunity.
- 5. What do you mean by pinocytosis? Name the type of cell involved in this.
- 6. Write notes on Immunosuppression.
- 7. Draw a labelled diagram of a typical immunoglobulin.
- 8. How do an antigen differ from a supper antigen? Explain with example.
- 9. What are cytokines? How do they help in defense?
- 10. Name the types of MHC molecules and their role.
- 11. Draw and explain TCR and BCR.
- ,12. Write an account on Type I hypersensitivity.
- 13. What do you mean by HLA? How will you do test a tissue matching?
- 14. Name the primary lymphoid organs. Add a note on their structure and function.
- 15. Write the contributions made by Kohler and Milestein.

 $(10 \times 5 = 50 \text{ marks})$

Turn over

2 D 4 •

Section C

Answer all questions. Each question carries 2 marks.

- 16. Name the Immunoglobulin that is a pentamer and can agglutinate.
- 17. How will you make a toxoid from toxin?
- 18. Define immunologic tolerance.
- 19. What are complements? Name an experimental animal from which one can get complement for lab use.
- 20. What are stem cells?

 $(5 \times 2 = 10 \text{ marks})$