D 52608 Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, FEBRUARY 2009

General Biotechnology

GBT 214—IMMUNOLOGY

Time: Three Hours

Section A

Answer any **two** questions.

- 1. Write an essay on 'Immunoglobulin super gene family'.
- 2. 'Humoral Immunity end in antibody production'—Justify.
- 3. How do APC acts? Explain.

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

Maximum: 80 Marks

Section B

Answer any ten questions.

- How do innate immunity differ from adaptive immunity.
- 5. What do you mean by positive and negative selection?
- 6. How do NK cell acts against a foreign material?
- 7. Draw and explain the cross-section of a Lymph node.
- 8. What are super antigens? In what way does it differ from antigen?
- 9. 'Antigen recognition MHC restricted'. Justify.
- 10. How do complement helps in defense mechanism?
- 11. What are cytokines? Name some with their role in defense system.
- List various types of hypersensitivity reactions and explain allergy.
- 13. How will you produce monoclonal antibodies?
- What do you understand by the term 'Lymphocyte traffic' ? Explain.
- 15. How do HLA helps in transplantation immunology?

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

Section C

Answer all questions.

- Define Hapten and Immunogen.
- 17. What do you mean by immunosuppression?
- 18. Expand AIDS. Name the causative agent.
- 19. What does the term 'autoimmunity'? Explain.
- 20. List immuno modulators.

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