

D 20747

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Name

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, SEPTEMBER 2011

Biotechnology

GBT 214—IMMUNOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

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

1. Describe TCR complex and the process of T-cell activation.
2. Explain the events associated with the development of tumors and host immune response against tumors.
3. What are allografts ? Explain the host responses leading to allograft rejection.

(2 x 10 = 20 marks)

Section B

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

4. Explain and draw the internal structure of Thymus.
5. How will you type HLA for tissue matching ?
6. Explain the properties of cytokines.
7. What are the salient features of anaphylactic hypersensitivity ?
8. Narrate the events of different phases of DTH reaction.
9. How will you produce monoclonal antibodies ?
10. Narrate the biology and features of super antigens.
11. What are the components of immune regulation ?
12. Draw and explain the features of macrophage.
13. Elucidate lymphocyte trafficking.
14. Draw a labelled sketch of IgG showing its domains.
15. Explain the immune deviations associated with HIV infection.

(10 x 5 = 50 marks)

Turn over

Section C

*Answer **all** questions.*

Each question carries 2 marks.

16. Comment on opsonins.
- 17.. What is tolerance ?
18. What are the significances of GALT and MALT ?
19. Define Apoptosis.
20. Which dose of immunoglobulin is suitable for passive immunization ?

(5 x 2 = 10 ma. es)