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| D 90 | 083 (Pages : 2) | Name |
| | | Reg. No |
| THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2010 | | |
| General Biotechnology | | |
| GBT 214—IMMUNOLOGY | | |
| Time: | : Three Hours | Maximum: 80 Marks |
| Section A | | |
| | Answer any two questions. Each question carries 10 marks. | |
| 1. | "Macrophage plays a major role in defense mechanism of human. | " Substantiate. |
| 2. | . What are complements? How do they help in defense? | |
| 3. | . Write an account on Humoral immune response. | |
| $(2 \times 10 = 20 \text{ marks})$ | | |
| Section B | | |
| | Answer any ten questions. Each question carries 5 marks. | |
| 4. | . "Recognition of self and discrimination of nonself'—What do you | mean by this? |
| 5. | . What is the role of natural killer cells? | |
| 6. | . What do immunopotentiation means? | |
| 7. | What are Lymph nodes? When do they present? What is its role? Explain. | |
| 8. | How do B cell develop? Where do they originate? | |
| 9. | Define allergen, antigen, immunogen haptin and super antigen. | |
| 10. | Draw a labelled diagram of MHC I and II and explain their role. | |
| 11. | What are monoclonal and polyclonal antibodies? Add a note on their merits and demerits. | |
| 12. | What are toxoids? How will prepare? Explain with example. | |
| 13. | . What do you mean by SRID? Explain. Add a note on its applicat | tions. |
| 14. | . Outline the role of spleen in immune system. | |

15. What is the contribution made by Bernet and Melavar?

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

Turn over

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Section C

Answer all questions.

Each question carries 2 marks.

- 16. Define precipitation.
- 17. What are the advantages of ELISA over RIA and IF?
- 18. What are CD means? Give four examples and their location.
- 19. What are stem cells? What is its significance?
- 20. Can we operate HLA and H₂?

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