

BIOTECHNOLOGY (Immunology)

Paper-III (Semester-V)

Time : Three Hours]

[Maximum Marks : 70

Note : Attempt two questions each from Section A and B. Attempt all questions in Section C.

Section - A

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|------|---|----|
| I. | Describe various cells involved in passive immunity. | 12 |
| II. | Write a detailed account on Electrophoresis. | 12 |
| III. | Write a detailed account on structure and function of Immunglobulins. | 12 |
| IV. | Write a detailed account on Immunofluorescence. | 12 |

Section - B

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|-------|--|----|
| V. | Write an account on the hypersensitivity. | 12 |
| VI. | Describe in detail production and applications of monoclonal antibodies. | 12 |
| VII. | Compare and conventional and modern vaccines with suitable examples. | 12 |
| VIII. | Describe in detail the process of transplantation and graft rejection. | 12 |

Section - C

- IX. Write short notes on the following :
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|-----|---|---------|
| (a) | Positive selection in the thymus occurs when thymocytes express functional versions of which critical molecule ? | |
| (b) | Which cytokine is essential for T-Cell proliferation and is also necessary for the production of CD25-positive regulatory T cells ? | |
| (c) | Who developed humoral theory ? | |
| (d) | What are antitoxins ? | |
| (e) | What is anaphylaxis ? | |
| (f) | What is immunoassay ? | |
| (g) | What is hematopoiesis ? | |
| (h) | What is opsonin ? | |
| (i) | What is primary response ? | |
| (j) | What is the difference between plasma and lymph ? | 2x11=22 |