(For candidates admitted from 2016-2017 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Biotechnology

IMMUNOLOGY

Time: Three hours

Maximum: 75 marks

SECTION A — $(10 \times 2 = 20)$

Answer ALL questions.

Write short notes on the following

- 1. Haematopoesis.
- 2. Immunoglobulins
- 3. Types of immune response.
- 4. Autoimmunity.
- 5. Define vaccine.
- 6. Monoclonal antibodies.
- 7. Define Immunity.

- 8. Immune response.
- 9. Acquired immunity.
- 10. Define transplantation.

SECTION B — $(5 \times 5 = 25)$

Answer ALL questions, choosing either (a) or (b).

11. (a) Give an account on Immunoglobulins.

Or

- (b) Explain about lymphoid tissues.
- 12. (a) Detailed account on TCR complex.

Or

- (b) Explain about exogenous and endogenous antigen.
- 13. (a) Detailed account on HLA typing.

Or

- (b) Explain a detailed account on Phagocytosis.
- 14. (a) Explain about Recombinant DNA.

Or

(b) Short notes on Active and passive immunization.

15. (a) Write a short note on graft rejection.

Or

(b) Write short notes on CD4+ T Cells.

SECTION C — $(3 \times 10 = 30)$

Answer any THREE questions.

- 16. Give an detailed account on principles of cell signaling.
- 17. Give an account on T cell development, maturation, activation and Differentiation.
- 18. Give an brief account on Major Histocompatibility complex- MHC Gene.
- 19. Explain about Conjugate vaccines, production and its applications.
- 20. Describe an account on Autoimmune diseases.