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# MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2025 2020, 2021, 2022 ADMISSIONS SUPPLEMENTARY ZOOLOGY SEMESTER IV - ELECTIVE COURSE

ZO4E02TM20 - Molecular Immunology

Time: 3 Hours

Maximum Weight: 30

#### Part A

## I. Answer any Eight questions. Each question carries 1 weight

(8x1=8)

- 1. Tabulate the differences between active and passive immunity.
- 2. Outline the concept of epitope.
- 3. Compose a brief note on inflammatory mediators.
- 4. Compile the causes and consequences of hereditary angioedema.
- 5. Define MAC. Trace the events involved in its formation.
- 6. Emphasize on HLA complex in humans.
- 7. Infer the role of lymphokines in immune regulation.
- 8. List out the treatment measures of autoimmune diseases.
- 9. Comment on WAS.
- 10. What is graft rejection? Indicate the three types of graft rejection reactions.

#### Part B

# II. Answer any Six questions. Each question carries 2 weight

(6x2=12)

- 11. Explicate the concept of antibody engineering.
- 12. Analyze the role of secondary lymphoid organs in immunity.
- 13. Emphasize on complement fixation.
- 14. Mention the principle and applications of Western blotting.
- 15. Describe the mechanism for Type V hypersensitivity. Cite an example.
- 16. Explain delayed Type IV hypersensitivity reaction.
- 17. Examine critically the causes and types of immunodeficiency diseases.
- 18. Describe the various stages in cell mediated graft rejection.

#### Part C

### III. Answer any Two questions. Each question carries 5 weight

(2x5=10)

- 19. Justify that the non specific components of innate immunity acts as barriers of a wide range of pathogens irrespective of their antigenic make up.
- 20. Elaborate on the activity of complement system in immunity.
- 21. Illustrate and describe the pathways involved in processing and presenting endogenous and exogenous antigens.
- 22. Give an account on the different types of vaccines available. Highlight their advantages and disadvantages.