

TM154670A

Reg. No:.....

Name:.....

**M. Sc. DEGREE (C.S.S.) EXAMINATION, MARCH 2017**  
**SEMESTER IV– ZOOLOGY**  
**ZY4EA02TM - MOLECULAR IMMUNOLOGY**

**Time: Three Hours**

**Maximum Marks: 75**

**PART A**

**I. Answer any five questions. Each question carries 3 marks**

1. Write notes on Toll-like receptors.
2. Give a brief account on lectin pathway.
3. Write notes on MALT.
4. Write notes on monoclonal antibodies.
5. Comment on NK cells.
6. Give a brief account on cytokines.
7. Write notes on SCID

**(5x3=15)**

**PART B**

**II. Answer any six questions. Each question carries 5 marks.**

8. Give an account on innate immune system.
9. Explain the mechanism of classical and alternate pathways of complement system.
10. Write an account on the cells of the adaptive immune system.
11. Describe the structure and functions of immunoglobins.
12. Give an account on immunodeficiency diseases.
13. Explain the principle and applications of ELISA.
14. Explain briefly the general organization and inheritance of MHC.
15. Explain briefly immediate and delayed type hypersensitivity reactions.
16. Discuss the molecular basis of antibody diversity.

**(6x5= 30)**

**PART C**

**III. Answer any two questions. Each question carries 15 marks**

17. Give an account on humoral and cell mediated immune responses.
18. Write an account on the organs of immune system.
19. Explain the various types of vaccines.
20. Give an account on autoimmune diseases.

**(2x15=30)**