

**M.SC DEGREE END SEMESTER EXAMINATION OCTOBER 2016****SEMESTER – 3: ZOOLOGY****COURSE: P3ZOOT12– IMMUNOLOGY**

Common for Regular (2015 Admission) &amp; Supplementary / Improvement (2014 Admission)

**Time: Three Hours****Max. Marks: 75****Part A**(Answer **any Eight** Questions. Each carries 2 marks)

1. What is HLA typing.
2. What is RAST?
3. Define haematopoiesis.
4. What is serum sickness.
5. Comment on monoclonal antibody.
6. How antibody diversity is generated.
7. Define agglutination.
8. List organs of secondary lymphoid system.
9. Comment on tumour immunology.
10. Write the principle of immunoelectron microscopy.
11. What is adjuvants ?
12. What is complement system. (2 x 8 = 16)

**Part B**(Answer **any Seven** Questions. Each carries 5 marks)

13. Comment on application of HLA typing.
14. Explain different types of vaccines.
15. Explain T-cell maturation and differentiation.
16. Give a brief account on immune response during bacterial and parasitic infection.
17. Explain the role of cytokines in immune system.
18. Mention the biological consequence of complement activation.
19. Brief account on multigene organization of Ig genes.
20. Short note on immunological basis of graft rejection.
21. Comment on pattern recognition receptors. (5 x 7 = 35)

**Part C**(Answer **any Two** question. Each carries 12 marks)

22. Explain various types of congenital immunodeficiency diseases.
23. Give an account on types of hypersensitivity.
24. Describe types, induction and treatment of autoimmunity.
25. Describe humoral and cell mediated immunity. (12 x 2 = 24)