

17P415

(Pages: 2)

Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2019

(CUCSS - PG)

(Zoology)

CC15P ZO4 C10 - IMMUNOLOGY

(Improvement/Supplementary)

(2015, 2016 Admissions)

Time: Three Hours

Maximum: 36 Weightage

I. Answer **all** questions. Each question carries 1 weightage.

1. Explain innate immunity.
2. What are Haptens?
3. Explain the significance of inflammation reaction.
4. Give an account of Bruton's disease.
5. Explain anti retroviral therapy.
6. Explain the TCR- CD3 complex.
7. What is cross reactivity?
8. Give an account of spleen and its importance.
9. What are antagonists?
10. What are TAP molecules?
11. Explain antigenicity.
12. What are NK cells.
13. Explain butterfly rash.
14. What are ITAMs.

(14 x 1 = 14 Weightage)

II. Answer any **seven** questions. Each question carries 2 weightage.

15. Explain the different types of Vaccines.
16. Explain the structure of MHC molecules.
17. Explain the mechanism and importance of antibody engineering.
18. Give an account of organ specific autoimmune diseases and treatment.
19. Discuss the role of Toll-like receptors in the immune system.
20. Explain the significance of monoclonal antibodies and Hybridoma technology.
21. Comment on the multiplication of HIV virus and the course of infection.
22. Explain the major cytokines and functions.
23. Discuss type I and type II hypersensitivity reactions.
24. Describe agglutination reaction in detail.

(7 x 2 = 14 Weightage)

III. Answer any *two* questions. Each question carries 4 weightage.

25. Explain the mechanism of antigen processing and presentation.

26. Write an essay on the complement activation and regulation.

27. Explain B- cell and T- cell generation, activation and differentiation.

28. Explain the major immunological techniques with applications.

(2 x 4 = 8 Weightage)
