

**D 52354**

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Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2018**

(CUCSS—PG)

Zoology

ZO3CT 07—IMMUNOLOGY

(2016 Syllabus Year)

Time : Three Hours

Maximum : 36 Weightage

**Part A**

I. Write short notes on *all* the fourteen questions. Each question carries 1 weightage :

- 1 SCID.
- 2 Natural live vaccines with one example.
- 3 Mast cells.
- 4 Xenograft.
- 5 Class III MHC molecules.
- 6 Role of anaphylatoxins.
- 7 Bacterial septic shock.
- 8 Role of calcineurin.
- 9 Cross reactivity.
- 10 RIA.
- 11 Framework regions of antibody.
- 12 Agglutinins.
- 13 Allotype antibody.
- 14 Adjuvant.

(14 × 1 = 14 weightage)

**Part B**

II. Answer any *seven* of the following. Each question carries 2 weightage :

- 15 Define immunogenicity and write the properties of B-cell and T-cell epitopes.
- 16 Give an account on Antibody engineering.

Turn over

- 17 Explain humoral and cell mediated immune response.
- 18 Give an account on cytokine related diseases.
- 19 Give an account on MHC molecules genes.
- 20 Describe the various biological mediators of type I hypersensitivity reactions.
- 21 Describe recombinant antigen vaccine and DNA vaccine.
- 22 Describe the mechanism of immunosuppression by HIV.
- 23 Give an account on immunological basis of transplant rejection.
- 24 Illustrate the Lectin pathway of complement activation.

(7 × 2 = 14 weightage)

### Part C

III. Answer any *two* of the following. Each question carries 4 weightage :

- 25 Explain the structure, classes and characteristics of immunoglobulin found in humans.
- 26 Give detailed account on the development and activation of T cells.
- 27 Discuss the various immunotechniques employed in antigen antibody interaction.
- 28 Explain the formation of B-lymphocytes and T-lymphocytes. Add a note on the regulation of haematopoiesis.

(2 × 4 = 8 weightage)