

FIVE YEAR INTEGRATED M.Sc., EXAMINATION 2021
SEMESTER - VII
Paper LS-4-7-1
Immunology and Immunotechniques

Time: Four Hours

Full Marks: 80

Questions are of value as indicated in the margin.

Answer **Question No.01**

1. Write short notes on **any ten** of the following:

2 x 10 = 20

- a. TCR
- b. Difference between haptens and carriers
- c. Plasma cells
- d. Interleukins
- e. Opsonins
- f. CRP
- g. Giant cells in granuloma
- h. Nude mice
- i. Secondary immunodeficiencies
- j. Provirus
- k. GISH
- l. ITAMs

Answer **any four** of the following from questions

4 X 15 = 60

- 2. a. Detail the structure and functions of IgG molecules. (5)
- b. Briefly discuss how skin and mucosal membrane acts as protective barriers against infection. (5)
- c. Explain how cytotoxic activity of NK cells are restricted to altered self-cells. (5)

3. a. Briefly describe B-cell activation by a thymus dependent antigen. (10)
b. Discuss the origin and function of secretory component in secreted IgA. (5)
4. a. Discuss any three properties of antigens that can influence its antigenicity. (6)
b. Briefly explain CTL mediated cell killing. (6)
c. Explain follicular dendritic cells and discuss their significance. (3)
5. a. Describe in detail about monoclonal antibody production. (8)
b. Describe different steps in the transport of Class II MHC molecules to the plasma membrane. (7)
6. a. Briefly explain the extravasation of neutrophils (8)
b. Briefly explain the structure and function of C1 macromolecular complex involved in classical complement activation (7)
7. Write short notes on 3 x 5 = 15
 - a. Grave's disease
 - b. RNA vaccines and its significance over live attenuated vaccines
 - c. Type I hypersensitivity reactions