

(2½ Hours)

[Total Marks : 60

- N.B. :** (1) All questions are **compulsory**.
 (2) All questions carry **equal** marks.
 (3) Draw **neat** and labelled diagram wherever **necessary**.

1. Answer the following questions :- (any **two**) 12
 (a) Describe the intracellular events which regulate mast cell degranulation.
 (b) With a suitable diagram, explain development of a localised Arthus reaction.
 (c) Describe the two phases of Delayed type of hypersensitivity.
 (d) "Release of sequestered antigens can induce autoimmune disease". Justify.
2. (a) Describe immuno suppressive therapy for transplantation. 8
OR
 (a) "Similar antigenic profiles foster allograft acceptance". – Justify. 8
 (b) Explain four types transplants. 4
OR
 (b) Describe clinical manifestations of graft rejection. 4
3. Answer the following questions :- (any **two**) 12
 (a) "Protooncogenes can be converted to oncogenes", – Justify.
 (b) "Tumor antigens may be induced by chemicals", – Justify.
 (c) Describe the roles of NK cells and macrophages in tumor recognition.
 (d) "Cytokine therapy can augment immune response to tumors", – Justify.
4. (a) What are Phagocytic Deficiencies ? Explain Chronic Granulomatous Disease (CGD). 8
OR
 (a) Define – Immunodeficiency. Explain secondary immunodeficiency with its consequences. 8
 (b) Write a note on X-linked agammaglobulinemia. 4
OR
 (b) "Complement defects result in Immunodeficiency", – Justify. 4
5. Write short notes on :- (any **three**) 12
 (a) Pharmacologically active mediators
 (b) Treatment of type II hypersensitivity
 (c) Microcytotoxicity test
 (d) Cytokine therapy against tumor
 (e) Wiskott - Adrich syndrome
 (f) Hashimoto's thyroiditis.