

Name/Title of Paper- IMMUNOLOGY

Time:-Three House. ]

[Maximum Marks:080

[Minimum Marks 29

नोट : दोनो खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

**Note:** Answer from Both the Section as Directed. The Figures in the right-hand margin indicate marks.

**Section-A**

1. Answer the following questions: (1x10=10)
  - (a) Who is the father of Immunology.
  - (b) What are B-Cells/
  - (c) What is hasten?
  - (d) What is antigen specificity?
  - (e) Give the full form of ELISA.
  - (f) What is agglutination?
  - (g) What is Innate Immunity?
  - (h) What is O and H in widol test
  - (i) How is typhoid diagnosis conducted?
  - (j) What is monoclonal antibody?
2. Define the following. (2x5 = 10)
  - (a) Immune system.
  - (b) Heterogeneity
  - (c) Complement fixation.
  - (d) Type - II immunity
  - (e) Adjuvant

**SECTION - B**

Answer all questions;

**Unit -I**

3. Write an essay on immunohematology. (15x4 = 60)

**OR**

Describe in detail on cells and organs in involved in immune system.

**Unit - II**

4. Describe in detail about theories of antibody formation.

**OR**

Explain in detail on structure and heterogeneity of immunoglobulin.

**Unit-III**

5. Explain in detail on in vivo techniques for identification of antigens

**OR**

Write about radio- immune assay and mention its application in diagnosis of clinical diseases caused by microorganisms.

**Unit-IV**

6. Write an essay on hypersensitivity.

**OR**

Write about complement components pathways and complement deficiencies.