

Instructions:

All questions are compulsory.

Illustrate your answers with neat diagrams wherever necessary.

Question - 1**Write the following**

- i) What is Complement? Explain properties and functioning of complement system. [07]
- ii) Discuss the role of B and T cells in immune system. [07]

OR

- i) Explain briefly – Cytokines and explain any two types of Cytokines. [07]
- ii) Discuss the role of thymus and spleen in immune system. [07]

Question - 2**Write the following**

- i) Explain in – vivo antigen – antibody interaction. [07]
- ii) Explain Antibody in brief and discuss IgA in detail. [07]

OR

- i) Explain Antigen in brief and discuss types of antigen in detail [07]
- ii) What is Antibody? Explain clonal selection theory for antibody formation. [07]

Question - 3**Write the following**

- i) Explain in detail IRMA with its advantages and disadvantages. [07]
- ii) What is the RAST test? Explain in brief. [07]

OR

- i) Explain the types of label immunoassay. [07]
- ii) Explain the advantages and disadvantages of the types of vaccines. [07]

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Question - 4

Write the following

- i) Describe type II hypersensitivity reactions and explain ADCC (Antibody Dependent cell mediated cytotoxicity). [07]
- ii) Explain the role of allo-antigens and MHC molecules in graft rejection. [07]

OR

- i) Explain three major types of graft rejection reactions. [07]
- ii) Explain in detail: HIV (Human Immunodeficiency Virus). [07]

Question - 5

Attempt any seven out of twelve

[14]

- i) Give one example of species immunity.
- ii) Write down the importance of ACP.
- iii) Write down Cytokines related Diseases.
- iv) What is a vaccine? Explain in two to three lines only.
- v) How MHC – I molecule work in humans
- vi) Give an example of autoimmune disease and its corresponding auto antigen.
- vii) Mention the name of the part of the antibody and antigen that interacts with each other.
- viii) Define direct and indirect recognition of alloantigens.
- ix) Define: Epitope.
- x) What is an agglutination reaction?
- xi) What is the role of adjuvants in vaccines in relation to antigen?
- xii) Explain HIV lifecycle – inside the host.

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