

B.Sc. Semester - 5 (CBCS) Examination
December - 2020 (Old Course)
IMMUNOLOGY(CORE)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figures to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

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- Q.1(A) Answer the following. (any one out of two) (07)
1. Write in detail about white blood cells with well labeled diagram
 2. What is role of Secondary lymphoid organ in immune system? Write in detail about anyone organ.
- Q.1(B) Attempt any one. (any one out of two) (04)
1. What is haematopoiesis? Draw the figure showing how blood cells are formed from HSC.
 2. What is difference between innate immunity and adaptive immunity.
- Q.1(C) Attempt any three. (out of five) (03)
1. _____ a biological preparation that provides active acquired immunity to a particular disease.
 2. Blood groups was first discovered by _____
 3. Name five cardinal signs of inflammation.
 4. _____ Immunity exhibit four immunologic attributes: specificity, diversity, memory and self/nonself recognition.
 5. _____ a fully differentiated B-lymphocyte (white blood cell) which produces a single type of antibody.
- Q.2(A) Answer the following. (any one out of two) (07)
1. Write in detail about structure and function of Immunoglobulin.
 2. What is Hybridoma Technology? Write its applications in brief.
- Q.2(B) Attempt any one. (Any one out of two) (04)
1. What is Fluorescence? Discuss in detail about applications of fluorescence technique in Immunology.
 2. Write the applications of ELISA
- Q.2(C) Attempt any three. (out of five) (03)
1. _____ an antigen-binding site, is a part of an antibody which recognizes and binds to an antigen.
 2. Full form of ELISA
 3. _____ a substance which enhances the body's immune response to an antigen.
 4. Western blots are primarily used to detect _____
 5. _____ varying amounts of soluble antigen are added to a fixed amount of serum containin antibody
- Q.3(A) Answer the question. (one mark Each) (07)
1. Write in detail about T cell receptor
 2. What is MHC molecule? Write in detail about structure and function of MHC Class I and Class-II molecule.
- Q.3(B) Answer the question. (any one out of two) (04)
1. Explain in detail processing of exogenous Ag through the endocytic pathway.
 2. Explain how Assembly and stabilization of MHC I – Ag complex occurs.

- Q.3(C) Attempt any three. (out of five) (03)
1. _____ and _____ CD8 function as co-receptors and assist with signal transduction.
 2. _____ and _____ subunits are present in MHC class I molecule.
 3. What is full form of ITAM.
 4. _____ site where maturation of T cell occurs.
 5. Full form of TAP.
- Q.4(A) Answer the question. (one mark each) (07)
1. What is complement system? Write in detail about classical pathway.
 2. What is cytokines? Write in detail about properties and function of cytokines.
- Q.4(B) Answer the Question. (any one out of two) (04)
1. What are the advantages and disadvantages of using attenuated organisms as vaccines?
 2. Explain the phenomenon of herd immunity. How does this phenomenon relate to the appearance of certain epidemics?
- Q.4(C) Attempt any three. (out of five) (03)
1. The _____ system comprises a group of serum proteins, many of which exist in inactive forms.
 2. _____ is an important cytokine of TH 1 response.
 3. Full form of HEV.
 4. _____ A type of immune cell that has granules (small particles) with enzymes that can kill tumor cells or cells infected with a virus.
 5. Full form of NSAIDs.
- Q.5(A) Answer the following. (any one out of two) (07)
1. What is graft rejection? What is mechanism of graft rejection and role of immunosuppressive drug?
 2. What is hypersensitivity? Write in detail about delayed hypersensitive reaction.
- Q.5(B) Attempt any one. (any one out of two) (04)
1. Write in brief about HIV cycle.
 2. Write in short symptoms associated with Graves disease.
- Q.5 (C) Attempt any three. (out of five) (03)
1. Example of type II (Cytotoxic) Hypersensitivity.
 2. _____ results from a defect in Thymic development.
 3. Full form of RAG.
 4. HIV binds to _____
 5. Example of _____ mice provide a means to study the role of specific genes on immune function.
