

**SARDAR PATEL UNIVERSITY****B.Sc. (VI- Semester) Examination****US06CBCH22 (Basic Immunology)****Date: 24-6-2022, Time: 10:00 AM to 12:00 PM****TOTAL MARKS: 70**

- Q.1 Choose the correct option and write it in the answer sheet: 10**
- Which of the following is the site for development and maturation of T-cell?
    - Bone Marrow
    - Thymus
    - Spleen
    - Lymphatic vessels
  - Cells involved in innate immunity are \_\_\_\_\_.
    - Natural Killer cell
    - Macrophages
    - Phagocytic cell
    - All of the above
  - B cells that produce and release large amounts of antibody are called:
    - Memory cells
    - Plasma cells
    - Basophils
    - Killer cells
  - Which of the following immunoglobulin is produced early in the primary response to infection?
    - IgG
    - IgA
    - IgM
    - Ig E
  - What is the name of the hypervariable region of immunoglobulin, which is responsible for its diversity?
    - FRs
    - Hinge region
    - Epitope
    - CDR
  - In which of the following zone gets precipitation in immunodiffusion techniques?
    - Antigen Excess zone
    - Equivalent zone
    - Antibody excess Zone
    - None of above
  - A sample of blood agglutinates in the presence of anti-B antibodies, but not in the presence of anti-A antibodies. What is the blood type of this sample?
    - Type A
    - Type B
    - Type C
    - Type AB
  - Insulin-dependent diabetes mellitus (IDDM) is caused by an autoimmune attack on
    - Liver
    - Spleen
    - Pancreas
    - Heart
  - Haemolytic disease of the new-born is caused by type of hypersensitivity
    - Type – I
    - Type- III
    - Type –II
    - Type- IV
  - A tissue graft between people who are not genetically identical is termed as
    - Isograft
    - Xenograft
    - Heterograft
    - Autograft

**Q.2 (A) Fill in the blanks**

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1. \_\_\_\_\_ Immunity is called the first line of defence.
2. Name the class of immunoglobulin has a pentameric structure: \_\_\_\_\_.
3. T cell-mediated Hypersensitivity reactions is \_\_\_\_\_.
4. Type I hypersensitivity is mediated by type of immunoglobulin \_\_\_\_\_.

**Q.2 (B) True or False**

1. B-cells and T-cells are two types of cells involved in adaptive immunity.
2. IgD mediate hypersensitivity reaction and responsible for allergic reaction.
3. Double immunodiffusion is an agar gel immunodiffusion.
4. Use of healthy blood vessels to replace blocked coronary arteries is example of autograft.

**Q.3 Answer the following in very short (Attempt any Ten)**

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1. What are the major events of an inflammatory response?
2. What is immunologic memory? Give its importance.
3. Give the immunological role of cortex and paracortex region of lymph node.
4. Differentiate T<sub>c</sub> and T<sub>H</sub> subpopulation of T cell.
5. How hepten is an antigen but not immunogenic?
6. Define Epitope and give its function.
7. What is bacterial agglutination? How it can used for diagnosis?
8. Give the clinical importance of Hemagglutination.
9. Name the dye used in immunofluorescence with its application.
10. Define Isograft and Allograft.
11. What is Autoimmunity and Tolerance?
12. Write down the role of IgE in Type I hypersensitivity.

**Q.4 Answer the following question in detail. (Attempt any four out of eight)**

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1. What is innate immunity? Discuss the role of four types of defensive barriers of innate immunity.
2. Explain the structure and immune function of thymus and bone marrow as primary lymphoid organs.
3. Give an account on: Heterodimer structure of immunoglobulin.
4. Write down the structural features and function of IgM
5. Write a note on : General principle and type of ELISA
6. Discuss the any two immunodiffusion method based on precipitation.
7. Describe the antibody mediated cytotoxic hypersensitivity (Type-II) with example.
8. Explain the following Systemic Autoimmune disease.
  - a. Systemic lupus erythematosus
  - b. Rheumatoid Arthritis

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