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SARDAR PATEL UNIVERSITY
B.Sc. (FIFTH SEMESTER)
Wednesday, 20TH NOVEMBER, 2013
US05CBIT04 IMMUNOLOGY
TIME: 10.30 A.M. TO 1.30 P.M.

TOTAL MARKS: 70

Q-1 MULTIPLE CHOICE QUESTIONS(attempt all questions) 10

- 1. Which of the following is not playing role in antibody-antigen interaction**
 - a. Hydrophobic interactions
 - b. Vander wals forces
 - c. Covalent bonds
 - d. Hydrogen bonds

- 2. A crossed precipitin line following double immunodiffusion is due to**
 - a. Agglutination to detect titer of anti-syphilis antibody
 - b. Rocket electrophoresis
 - c. RIA
 - d. Radial immune diffusion

- 3. Germinal centre are inevitable for which process of development of B-cell**
 - a. Activation
 - b. Affinity maturation
 - c. Class switching
 - d. Maturation

- 4. Two or more cytokines that mediate similar functions are said to be**
 - a. Pleiotropic
 - b. Antagonism
 - c. Redundancy
 - d. Synergy

- 5. Immunodeficiency disease SCID results due to defect in**
 - a. RAG1/RAG2 deficiency
 - b. Low IgA, IgE
 - c. T and B-cell development
 - d. Defect in MHC-II

6. **The major antibody molecule which is involved in classical pathway is**
 a. IgM
 b. IgE
 c. IgD
 d. IgA
7. **A class of genes encode various secreted proteins that have immune functions including components of complement system and molecules involved in inflammation**
 a. MHC-I
 b. MHC-II
 c. MHC-III
 d. None of above
8. **_____ is an important defence against intracellular pathogen**
 a. Hypersensitivity I
 b. Hypersensitivity II
 c. Hypersensitivity III
 d. Hypersensitivity IV
9. **Auto antibodies to intrinsic factor blocks vitamin B12 absorption?**
 a. Pernicious anaemia
 b. Haemolytic anaemia
 c. Drug induced anaemia
 d. All of the above
10. **Which test is best suited for detection of HIV**
 a. Direct ELISA
 b. Indirect ELISA
 c. Sandwich ELISA
 d. Competitive ELISA

10. Give structure of Class I macromolecular complex.
 11. Give causes of primary immunodeficiency.
 12. Define complement immunodeficiency.

- Q-3 A Explain Agglutination reaction with its types and significance. 05
 B Explain CFT with labelled diagram. 05

OR

- Q-3 A Explain ELISA in detail. 07
 B Explain immunoelectrophoresis in detail. 03

- Q-4 A Give an account on SCID. 06
 B Diagrammatically explain alternate pathway of complement system. 04

OR

- Q-4 A Schematically explain classical pathway of complement system. 05
 B Give an account on AIDS. 05

- Q-5 A In spite having a tolerance system give possible mechanism responsible for autoimmune disease. 06
 B Explain type II hypersensitivity. 04

OR

- Q-5 A Discuss Ig-E mediate Hypersensitivity. 06
 B Discuss mechanism of graft is rejected. 04

- Q-6 A Write short note on activation and maturation of B-cell. 10

OR

- A Discuss in detail types and properties of Cytokines. 10

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Q-2

ANSWER SHORT QUESTIONS (Attempt any ten)

20

1. Enlist types of ELISA and also enlist enzymes that are used in ELISA.
2. Enlist various types of grafts in transplantation.
3. Describe about the component of CFT.
4. Dendritic cell are potential activator of T-cell explain.
5. What are various functions of NK cells?
6. Briefly explain class switching and its significance?
7. What do you understand by molecular mimicry?
8. What is graft V/S host reaction?
9. Define allograft and autograft.