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SARDAR PATEL UNIVERSITY

B.Sc Examination, Fifth Semester

Biotechnology

USO5CBIT-04

(Immunology)

DT: 18/11/2019 , Monday

Time: 10:00-1:00pm **Marks: 70**

Q-1 **Multiple choice question(attempt all)** **10**

1. Avidity is important because?
   a) The J chain
   b) It determines the binding strength of Ag-Ab
   c) G-protein mediates signal
   d) Fc receptor binding
2. Indicate the most appropriate assay for detecting syphilis bacterium in serum is?
   a) RIA
   b) RID
   c) Agglutination
   d) Rocket electrophoresis
3. _____ is referred as Mitogen.
   a) TI-1 antigen
   b) TI-2 antigen
   c) Antibodies
   d) T-helper cell
4. The interferon's are
   a) Antigen proteins
   b) Antibiotic protein
   c) Antiviral protein
   d) none
5. Which of the following complement is most potent to anaphylatoxin?
   a) C1r
   b) C4a
   c) C5a
   d) C3a
6. MAC in complement system consist of?
   a) C1-C4
   b) C5b-C9
   c) C3b5b
   d) C3
7. Serum sickness is an example of?
   a) Type-I Hypersensitivity
   b) Type-II Hypersensitivity
   c) Type-III Hypersensitivity
   d) Type-Iv Hypersensitivity
8. An immediate rejection by pre-existing antibodies against graft antigen is called?
   a) Hyperacute rejection
   b) Acute recjection
   c) Chronic rejection
   d) All of the above
9. Originally called as T-cell growth factor
   a) IL-2
   c) TNF

(PTO)

b) Interferon d) Chemokine

10. Auto antibodies to intrinsic factor blocks vitamin B12 absorption?
    a) Pernicious anemia c) Drug induced anemia
    b) Hemolytic anemai d) none

Q-2 **Short question(attempt any ten)** **20**

1. Give an account on RID
2. What do you understand by Zone phenomenon
3. Enlist the enzymes used in ELISA
4. Give suitable difference between B cell and T cell.
5. Give function of Chemokines.
6. What do you understand by positive and negative selection
7. Give function of complement
8. Give an account on MB-Lectin pathway.
9. How is HIV transmitted?
10. Give an account on molecular mimicry.
11. Define Vaccines and enlist its types.
12. Give function of MHC molecule.

Q-3 **A** Give a detail account on ELISA **06**
B Discuss Immuno-electrophoresis. **04**

OR

Q-3 **A** Discuss in detail various types of Agglutination **06**
B Give an account on RIA **04**

Q-4 **A** Give a detail account on T-cell development. **10**

OR

Q-4 **A** Discuss B-cell Activation. **06**
B Write a note on NK cells **04**

Q-5 **A** Give a detail account on activation of Complement pathway by immune complex **06**
B Write note on HIV **04**

OR

Q-5 **A** Give a detail account on SCID **06**
B Discuss alternate pathway. **04**

Q-6 **A** Discuss Type-I hypersensitivity **10**

OR

Q-6 **A** Give a comparative account on MHC-I and MHC-II molecule. **05**
B discuss mechanism how is graft rejected **05**