

[49]

Seat No : _____

No. of Printed Pages : 2

Sardar Patel University

Ty. B.Sc. Fifth Semester Examination-2019

Subject-Genetics

Course-US05CGEN05 - Immunogenetics

Time: 10:00 am to 01:00 pm

Date: 20/11/2019, Wednesday

Total Marks-70

Q.1 Multiple Choice Questions (one mark each) Attempt all 10M 10

- 1 Passive movement of Ab and Ag through a gel
a) Primary Reaction b) ELISA Detection c) Immunodiffusion d) none of these
- 2 Commercially available ELISA kits are used for the detection of
a) rotavirus b) hepatitis B surface antigen c) anti-HIV antibodies d) all of these
- 3 The T-cell receptor
a) Is composed of four polypeptide chains b) is secreted into the plasma by the T-cell
c) Is the recognition element of the humoral arm of the immune system
d) recognizes antigen fragments via the alpha and beta chains
- 4 Monoclonal antibodies are produced by
a) lymphocytes b) Myeloma cells c) Hybridomas d) Spleen cell
- 5 The immunoglobulin found in mother's milk is
a) IgM b) IgA c) IgE d) IgG
- 6 Class switching of immunoglobulins occurs
a) binds complement b) Usually with booster immunizations, going from IgM to IgG
c) causes the histamine release d) mediates immunoglobulin class switching
- 7 Which of the following cell/cells express MHC II on the surface?
a) Lymphocytes b) Macrophages c) Dendritic cells d) All of above.
- 8 One principal function of complement is to
a) Bind antibodies attached to cell surfaces and to lyse these cells b) inactivate
perforins c) mediate the release of histamine d) cross link allergens.
- 9 Allergy to penicillin is an example of
a) Type I hypersensitivity b) Type II hypersensitivity c) Type III hypersensitivity d)
Type IV hypersensitivity
- 10 A vaccine can be
a) An Ag protein b) Weakened pathogen c) Live attenuated pathogen d) All of above

(1)

(PTO)

- Q.2 Short questions : Attempt any ten** **20 M**
- 1 What is rocket immuno electrophoresis?
 - 2 Give the difference between antigen and immunogen.
 - 3 Write in brief about RIA?
 - 4 Draw the labeled diagram of BCR and TCR.
 - 5 List the theories of antibody diversity.
 - 6 Define antibody diversity and list its applications.
 - 7 Define phagocytosis and inflammation.
 - 8 List the function of complement system.
 - 9 Draw a diagram of exogenous antigen.
 - 10 What are interferon and chemokine?
 - 11 Define hypersensitivities and list its type.
 - 12 Define vaccines and enlist types of vaccines.
- Q.3** Write the explanatory note of immunoglobulin structure and its classes **10**
- OR**
- Q.3** Write short note on **10**
- a) Precipitation curve
 - b) Complement fixation test
- Q.4** Explain genetic basis of antibody diversity. **10**
- OR**
- Q.4** Discuss with diagram rearrangement of Ig gene. **10**
- Q.5 A** What is complement system? Discuss the alternative pathway of complement activation. **07**
- Q.5 B** Write short note on immunosuppression. **03**
- OR**
- Q.5 A** Explain cytosolic pathway of Antigen processing and presentation. **06**
- Q.5 B** Write a note on transplantation. **04**
- Q.6** Define autoimmunity and discuss mechanisms for generation of auto immune disorder. **10**
- OR**
- Q.6** Write short note on **10**
- a) AIDS- an acquired immunodeficiency
 - b) SCID