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Sardar Patel University
Fifth semester examination-2013

Subject-Genetics

Course-US05CGEN05 - Immunogenetics

Time 3 hrs

Date: 22/11/13

Total Marks-70

10.30 - 1.30 pm

Q1 Multiple Choice Questions (one mark each)

[10]

- 1 Alum is used as _____
A) Epitopes B) Haptanes C) Adjuvant D) None of above
- 2 Agglutination is a _____ type of immunoassay
A) Qualitative B) Quantitative C) Both A and B D) All of above
- 3 _____ class of antibody is found in least concentration
(a) IgA (b) IgD (c) IgG (d) IgE
- 4 Heavy chain immunoglobulin genes in humans are located on chromosome number
(a) 22 (b) 16 (c) 12 (d) 14
- 5 Endogenous antigen is processed by _____ pathway
A) Cytosolic B) Endogenous C) Both A and B D) None of above
- 6 Effector molecule in Type I hypersensitivity is
A) IgE B) IgG C) IgM D) IgD
- 7 Time required for seroconversion in HIV infection is
A) 10 weeks B) 12 weeks C) 15 weeks D) 20 weeks
- 8 Example of primary immunodeficiency is
A) AIDS B) SCID C) Both A and B D) All of above
- 9 Least accepted graft is
A) Allograft B) Autograft C) Xenograft D) Both A and B
- 10 One Turn RSS has intervening sequence of
(a) 23bp (b) 12bp (c) both a and b (d) 24bp

Q2 Short questions : attempt any ten

[20]

- 1 Give principle of Complement fixation test.
- 2 Give characteristics of antigen-antibody reactions.
- 3 Draw Immunoglobulin structure
- 4 Give full form of BCR & TCR and define Clonal-selection theory
- 5 Define Monoclonal antibodies.
- 6 Enlist theories for Antibody diversity
- 7 Define inflammation, give the signs of inflammation.
- 8 Enlist functions of complement proteins

- 9 Give different strategies for Immunosuppression
- 10 Define Hypersensitivities ,enlist its types
- 11 Define Vaccines, enlist its types
- 12 Define Immunodeficiencies. Enlist its types with example.

- Q.3 a. Discuss in detail principles and types of enzyme linked Immunosorbent assay [06]
b. Write a short note on radial immunodiffusion [04]

OR

- Q.3 a. Write a detail note on precipitation curve [06]
b. Write a short note Complement fixation tests [04]

- Q.4 Discuss in detail genetic basis of antibody diversity [10]

OR

- Q.4 a. Discuss in detail deletional joining of immunoglobulin genes [06]
b. Discuss technique for production of monoclonal antibody [04]

- Q.5 a. Write a note on Classical pathway for complement activation [05]
b. Write a brief note on MHC- class II structure and function [05]

OR

- Q.5 a. Write a explanatory note on activation of complement proteins by alternative pathway [05]
b. Discuss endogenous pathway for Antigen processing and presentation [05]

- Q.6 a. Write a detail note on AIDS [06]
b. Write a short notes on Vaccines [04]

OR

- Q.6 a. Discuss mechanisms of generation of auto immune disorders [06]
b. Write a short note on Hypersensitivities [04]

ALL THE BEST