SEAT No._____ No. of Printed Pages : 2

[90]

Sardar Patel University

Biotechnology, Semester –V

Tuesday, 29th December 2020

US05CBIT-24

(Immunology)

Time: 02:00-04:00pm **Marks: 70**

Q-1 **Multiple choice Question (Attempt all)** [10]

1. _____ are first line of defense against viruses.
   a) Ig G
   b) B cell
   c) T cell
   d) Interferons
2. Central tolerance refers to which of the following processes?
   a) Destruction of self-Ag that are specific for lymphocytes
   b) Production of self-Ag that are specific for lymphocytes
   c) Destruction of lymphocytes that are not specific for self-Ag
   d) Destruction of lymphocytes that are specific for self-Ag
3. Which of the following substance will not stimulate an immune response unless they are bound to large molecule?
   a) Antibody
   b) Hapten
   c) Virus
   d) Antigen
4. What is another name of double diffusion in one dimension?
   a) Oudin method
   b) Outerlony method
   c) Oakley fluthrope
   d) Macini method
5. In which of the following case a large lattice is formed?
   a) Antibody excess
   b) Antigen and antibody are in optimal proportion
   c) Antigen is excess
   d) All of the these
6. ___ is also known as T cell growth factor.
   a) IL-2
   b) TNF-α
   c) Interferon-γ
   d) TNF-β
7. Caspases belongs to the class of _____.
   a) Cystine proteases
   b) Aspertate proteases
   c) Serine Proteases
   d) hydrolases
8. Which of the following is involved in the intrinsic pathway of apoptosis?
   a) Cytochrome a
   b) Cytochrome b
   c) Cytochrome c
   d) Cytochrome d
9. If the blood group of an individual is A then the antibody present in serum is

a) Anti A antibodies
b) Anti B antibodies
c) Anti O antibodies
d) Anti OA antibodies

10. Type III hypersensitivity is triggered by ?
a) Mast cell and IgE
b) Th cell
c) Ig G antibody
d) Deposition of immune complex

Q-2 **Answer the following (Attempt all)** [08]

1. _____ Antibody can cross the placenta.
2. B cell and T cell are responsible for Innate immunity. State true or false.
3. _____ Cytokines are responsible for leukocyte trafficking.
4. Widal test is an example of Agglutination reaction. State true or false.
5. ____ Class MHC molecule is present in all nucleated cell.
6. Delayed hypersensitivity is mediated by B cell. State true or false.
7. All tumor cell are cancerous cell . State true or false
8. Nk cells can kill their target even in absence of antigen. State true or false.

Q-3 **Short Question(Attempt all)** [20]

1. Give an account on Rh blood group.
2. Give function of Immunoglobulin M.
3. Give basic difference between innate and adaptive immunity.
4. Give idea about passive agglutination.
5. Give an account on Oucterlony method.
6. What are chemokines and give their function.
7. Give an account on molecular mimicry.
8. Give function of Complement.
9. How is HIV virus transferred and give symptoms of AIDS.
10. Discuss the characteristic of a cancerous cell.
11. What do you understand by proto-oncogene and oncogene?
12. What is significance apoptosis?

Q-4 **Long Question (any four)** [32]

1. Give an account on active and passive immunity.
2. Give a detail structure of Immunoglobulin.
3. Discuss Principle, Procedure and different variants of ELISA
4. Write a note on Cytokines.
5. Give a detail structure of MHC molecule.
6. Discuss in detail classical pathway.
7. Discuss extrinsic and Intrinsic pathway of Apoptosis along with diagram.
8. Write note on mechanism and types of cancer.

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