



JX-003-001519

Seat No. _____

B. Sc. (Sem. V) (CBCS) Examination

October – 2019

BT - 503 : Immunology

Faculty Code : 003

Subject Code : 001519

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Objective questions : 20

1. What is the contribution of Louis Pasteur ?
2. Who is known as father of transfusion ?
3. Full form of MHC ?
4. Which cell arrives first to site of inflammation ?
5. What is full form of RIA ?
6. Full form of NK cell ?
7. Full form of RAG.
8. Name immunoglobulin molecule participating in Hypersensitive reaction.
9. Give an example of another name of hypersensitivity reaction type II.
10. Give an example of secondary immunodeficiency disease.
11. Name the molecule which provides antiviral state to host.
12. Name the immunoglobulin which crosses placenta.
13. Name the site of maturation for B cell.
14. Give an example of a non-organ-specific (systemic) autoimmune disease.
15. Give one word for "Highest dilution of antibody still able to give a positive result in a test system."
16. Which molecule can be detected using Western blots technique ?
17. Full form of ADCC.
18. Name the defect due to Di George syndrome.
19. Name the molecule where HIV virus interacts.
20. What is the full form of TAP.

- 2 (a) Write any three out of six 6
1. What are the two primary roles of the bone marrow ?
 2. How secondary immune response is different from primary immune response ?
 3. What is Affinity Maturation ?
 4. Write the name of enzymes used in the ELISA.
 5. What is the meaning of "The Tc cell is said to be class I restricted" ?
 6. Enlist function of Neutrophil.
- (b) Write any three out of six : 9
1. What is full form of DC ? Draw and discuss the structure of DC.
 2. Write a short note on properties of Adjuvant.
 3. Write in detail about antimicrobial activity exhibited by macrophages.
 4. Write applications of fluorescence in Immunology.
 5. What is the difference between innate immunity and adaptive immunity.
 6. Write a note on Radioimmunoassay.
- (c) Write any three out of five : 10
1. What is Haematopoiesis ? Discuss in detail about how different cells are formed during haematopoiesis ?
 2. Write a short note on processing and presentation of cytosolic antigen.
 3. Discuss how T_H cell plays an important role in Immunity.
 4. What is monoclonal antibodies ? Write in detail about hybridoma technology ?
 5. Write in detail about structure and function of Immunoglobulin.
- 3 (a) Write any three out of six : 6
1. Exogenous peptides antigens can be presented by class II MHC molecules. Justify.
 2. What is immunodeficiency disease ? Enlist two examples of primary immunodeficiency disease.
 3. Explain subunit vaccine with examples.
 4. List cytokines participating in Th2 response.
 5. Write the role of IFN γ in immunity.
 6. What is chemokines ? How does chemokines act as key molecule in the inflammation ?

- (b) Write any three out of six : **9**
1. List structural and functional differences between class I and class II MHC molecules.
 2. Describe the general structure and function of the Cytokines.
 3. Define auto immune disease. Describe any one autoimmune disease in detail.
 4. What are Vaccines ? Discuss in detail about advantages and disadvantages of DNA Vaccine.
 5. What are steroids ? Discuss its role as anti-inflammatory drugs.
 6. What is immunosuppressive drugs ? Discuss the role of immunosuppressive drugs in transplantation.
- (c) Write any two out of five **10**
1. What is hypersensitivity ? Explain in detail about Type I hypersensitivity reaction ?
 2. What is inflammation ? Discuss in detail about lipid molecules as inflammatory agent.
 3. What is complement ? Discuss in detail about classical pathway of complement.
 4. What is Transplantation Immunology ? Write in detail about types and mechanism of Graft rejection ?
 5. Discuss in detail about B cell maturation ? What is the importance of positive and negative selection during maturation process ?
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