

Roll No.

Total No. of Pages : 02

Total No. of Questions : 11

M.Sc.(BT) (2018 Batch) (Sem.-2)

IMMUNOLOGY AND IMMUNOTECHNOLOGY

Subject Code : MBT-202

M.Code : 76246

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SEVEN questions carrying SIX marks each and students have to attempt any FIVE questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

- a) Define immunoprecipitation.
- b) What are proto oncogenes?
- c) Why is apoptosis important? What triggers apoptosis?
- d) What are proinflammatory cytokines?
- e) Name common autoimmune disorders.
- f) What is human leukocyte antigen? Describe its significance.
- g) What are monoclonal and polyclonal antibodies?
- h) What is opsonization?
- i) What do you mean by compromised immune system? How does it differ from immunosuppression?
- j) Describe the significance of CD4 cells.

SECTION-B

2. What are the components of cell-mediated immunity? Explain.
3. Describe the structure and function of immunoglobulins. Define isotypes, allotypes and idiotypes.
4. What are cytokines? How are they useful in immunology?
5. How are monoclonal antibodies produced? Describe the advantages and limitations of monoclonal antibodies.
6. Describe the molecular mechanism of cancer induction.
7. Write a note on antigen presenting cells.
8. What is a graft? What is an autograft, allograft and isograft? Explain with suitable examples. What is the most successful type of transplant?

SECTION-C

9. What is immunohistochemistry? What are IHC markers? Describe the fundamental principle and applications of IHC.
10. Give the mechanism and pathology of autoimmune disorders.
11. Write a note on production and maturation of B-cells.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.