CBCS SCHEME

USN | | | | | | | | | | |

15BT53

Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Immunotechnology

Time: 3 hrs. Max. Marks: 80

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. State the classification system of Lymphoid organs and draw the structure of Spleen [L_1]. **(06 Marks)**

b. List out the different barriers of innate immune response and add a note on Interferon activity. **(06 Marks)**

c. Explain the structure of Immunoglobulin molecule (IgG). **(06 Marks)**

OR

2 a. Name the two circulative system of human body and draw the structure of lymph node. **(06 Marks)**

b. Macrophages makes a second line of defence. Justify the statement in a labeled diagram. **(06 Marks)**

c. Discuss the various function of Immunoglobulin molecule. **(04 Marks)**

Module-2

3 a. How would you say that Immunoglobulin gene rearrangement mechanism creates antibody diversity? **(08 Marks)**

b. Enumerate the structural difference between MHC – I and MHC – II receptors. **(08 Marks)**

OR

4 a. Define Monoclonal Antibodies. Explain the process of hybridoma technology. **(08 Marks)**

b. Illustrate the process of endocytic pathway of Antigen processing and presentation in a flow diagram. **(08 Marks)**

Module-3

5 a. Define Complement system and analyse the mechanism of classical pathway of complement system. **(08 Marks)**

b. Explain in brief the mechanism of AIDS. **(08 Marks)**

OR

6 a. What is Hypersensitivity? Predict the mechanism of allergic response. **(08 Marks)**

b. List the different types of autoimmune disorders. Discuss the mechanism behind Rheumatoid arthritis. **(08 Marks)**

Module-4

7 a. Define Graft. Explain the different types of graft with suitable example. **(04 Marks)**

b. Predict the role of MHC molecules in allograft rejection. **(08 Marks)**

c. Add a note on classification of vaccines. **(04 Marks)**

OR

8 a. What are Hematopoietic stem cells? Discuss their application in transplantation immunology. **(05 Marks)**
b. Identify the process for designing Recombinant DNA vaccines taking an example. **(07 Marks)**
c. Add a note on Tumor Antigens. **(04 Marks)**

Module-5

9 a. Describe the process of Immuno electrophoresis. **(05 Marks)**
b. Explain the principle of Radio Immuno Assay (RIA). **(05 Marks)**
c. List the different type of ELISA and explain the principle of indirect ELISA. **(06 Marks)**

OR

10 a. Describe the process of Rocket Immuno electrophoresis (RIE). **(05 Marks)**
b. Explain the principle involved in ABO blood grouping. **(07 Marks)**
c. What is 'FACS'? Add a note on its applications. **(04 Marks)**

* * * * *