Registration No. : | | | | | | | | | | |

Total number of printed pages – 2

B. Tech

PCBT 4301

Fifth Semester Regular Examination – 2014

IMMUNOLOGY AND IMMUNOTECHNOLOGY

BRANCH : BIOTECH

QUESTION CODE : H 142

Full Marks – 70

Time : 3 Hours

*Answer Question No. **1** which is compulsory and any **five** from the rest.*
The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2 ×10

   (a) What are the different types of immunity ? Explain with suitable example.

   (b) Differentiate between IgG and IgM.

   (c) What is DTH ? Name the effecter cells in DTH.

   (d) What is the basis of clonal selection theory ?

   (e) What are the different types of vaccine ?

   (f) Differentiate between monoclonal and polyclonal antibody.

   (g) What is auto immunity ? Explain with suitable example.

   (h) Define Abzyme.

   (i) What is hapten ? How it is different from antigen ?

   (j) What are the cells involved in antigen processing ?

2. What are dysfunctions of immune system ? Discuss the different approaches employed for correcting immune dysfunction. 4 + 6

3. What is lymphoid organ ? Classify them and give an account on the structure and function of secondary lymphoid organ. 10

P.T.O.

4. (a) What is complement system? Briefly discuss the different complement activation pathways. 5

(b) Write a note on antigen-antibody reaction. 5

5. (a) What is a vaccine? Explain the different types of vaccine with suitable examples. 5

(b) Write a note on molecular basis of antibody diversity. 5

6. (a) What is hybridoma technology? Discuss in details the production of MAb in hybridoma technology. 5

(b) What is antigen processing? Explain the cytosolic pathway of antigen processing and presentation. 5

7. (a) What is hyper sensitivity? Classify different types of hypersensitivity reactions with examples. 5

(b) Explain the structure of MHC-II molecules. 5

8. Write short notes on any two : 5×2

(a) Immunoproliferate diseases

(b) Graft versus host reaction

(c) Immune tolerance

(d) Cells of immune system.