

Registration No. :

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Total number of printed pages – 2

B. TECH
PCBT 4301

Fifth Semester (Back/Special) Examination – 2013

IMMUNOLOGY AND IMMUNOTECHNOLOGY

BRANCH : BIOTECH

QUESTION CODE : D 256

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) Name two primary and secondary lymphoid organs present in human.
 - (b) What are memory cells and how do they participate in immune response ?
 - (c) What do you mean by hapten? What is its significance ?
 - (d) Name two immunoglobulin secreted in mother's milk and human saliva.
 - (e) What is allelic exclusion and how it is regulated ?
 - (f) Which type of immunodeficiency is expected in person whose spleen is removed ?
 - (g) Name two immunoproliferative diseases of human.
 - (h) What do you mean by graft versus host reaction ?
 - (i) What is ADCC ?
 - (j) What do you mean by dysfunction of immune system ?
2. Write short notes on : 5 × 2
- (a) Antigen - Antibody reaction
 - (b) APC.



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3. Differentiate between : 5×2
- (a) Innate and Adaptive immunity
 - (b) Polyclonal and Monoclonal Antibody.
4. What are MHC molecule ? Explain the structure and function of Class I and Class II MHC molecules. 10
5. Write short notes on : 5×2
- (a) Synthesis and secretion of antibody molecule
 - (b) Immunological tolerance.
6. (a) Briefly explain the various causes of autoimmune diseases. 5
- (b) Briefly explain the genetic basis of antibody diversity 5
7. Briefly Explain : 5×2
- (i) DNA vaccine
 - (ii) MAC.
8. Write short notes on any **two** of the following : 5×2
- (a) Passive Immunity
 - (b) Antibody class
 - (c) T-cell receptor
 - (d) Phagocytosis.

