

Printed Pages: 02

Sub Code: BT405

Paper Id:

154405

Roll No.

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B. TECH
(SEM IV) THEORY EXAMINATION 2017-18
IMMUNOLOGY

Time: 3 Hours

Total Marks: 100

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

- 1. Attempt *all* questions in brief. **2 x 10 = 20****
- (a) What is HLA complex?
 - (b) Describe role of Interleukins.
 - (c) Describe first line of defense in short.
 - (d) What is Recombinant Vaccine?
 - (e) What is paratope?
 - (f) What is Immunoblotting?
 - (g) Describe role of primary lymphoid organs.
 - (h) What as APCs?
 - (i) Explain precipitin curve formation in short.
 - (j) Discuss about Cluster of differentiation molecules (CDs) in short.

SECTION B

- 2. Attempt any *three* of the following: **10 x 3 = 30****
- (a) Explain antigen processing and presentation in detail?
 - (b) What is MHC complex? Explain function of various MHC molecules in detail.
 - (c) Explain immune tolerance in detail?
 - (d) Discuss antigen- antibody interaction in detail? Also explain role of affinity and avidity.
 - (e) What are monoclonal antibodies? Discuss production and application of monoclonal antibodies in detail?

SECTION C

- 3. Attempt any *one* part of the following: **10 x 1=10****
- (a) What is role of inflammation in our life? Explain in detail.
 - (b) What do you understand by grafts? Explain concept of grafting and reasons for rejection of graft in detail?

4. **Attempt any *one* part of the following:** **10 x 1=10**
(a) Explain B cell and T cell maturation and differentiation in detail.
(b) What do you mean by autoimmune disorders? Discuss any autoimmune disorder in detail.
5. **Attempt any *one* part of the following:** **10 x 1=10**
(a) What do you understand by Complement System? Explain its functions in detail?
(b) Discuss ELISA techniques with its application in diagnostics in detail?
6. **Attempt any *one* part of the following:** **10 x 1=10**
(a) What do you mean by antibodies? Explain various types of antibodies in detail.
(b) What are the main factors which affect immunogenicity? Discuss in brief.
7. **Attempt any *one* part of the following:** **10 x 1 =10**
(a) Define agglutination reaction in detail with suitable examples?
(b) Explain cytokines and its applications in detail.