Printed Pages : 3

EBT402

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 154408

Roll No. | | | | | | | | | |

B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15
IMMUNOLOGY

Time : **3** Hours]   [Total Marks : **100**

Note : Attempt all questions.

1   Attempt any two parts of the following :   **10x2=20**

(a)   What are the cells of immune system? How does innate immunity work?

(b)   Describe the process of hematopoiesis and discuss the factors which can influence it.

(c)   What are the characteristics of T and B cell epitopes? Explain their role in adaptive immunity.

2   Attempt any two parts of the following :   **10x2=20**

(a)   What are ABO blood group antigens? Explain the cross reactivity of antibodies with ABO blood groups.

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(b) What do you mean by the constant and variable regions of the antibody molecules? Discuss the function of F_{ab} and F_c regions.

(c) Write short notes on :

(i) Adjuvants

(ii) Isotypes and Idiotypes

3 Attempt any two parts of the following :   10x2=20

(a) What is human MHC? Explain the structural and functional aspect of MHC class I and II molecules.

(b) What are cytokine? Discuss the function and applications of interferon.

(c) Write short note on:

(i) Immune tolerance

(ii) Complement system.

4 Attempt any two parts of the following :   10x2=20

(a) What is ELISA ? Discuss the other applications of antigen-antibody interaction.

(b) What do you mean by vaccination? Discuss the various types of vaccine along with their advantages and disadvantages.

(c) Describe the hybridoma technology citing the importance of HAT selection.

5   Attempt any two parts of the following:-   **10x2=20**

(a)   Discuss the importance of Autograft, Isograft, Allograft and Xenograft in transplant immunology.

(b)   Discuss the activity of immune system against the Plasmodium falciparuni and its vaccine development status.

(c)   Write short notes on :

(i)   Hypersenstivity

(ii)   Autoimmunity

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