



PP-444

Seat No. _____

B. Sc. (Sem. VI) (Biotechnology) Examination

April / May - 2016

CBT-601 : Fundamentals of Immunology

Time : 3 Hours]

[Total Marks : 70

- 1 Answer all questions. Each question carries 15 one mark :
- (1.1) APC Cells -
- (A) B-Cell and Macrophage
 - (B) Mast cells and T-Cell
 - (C) T-Cell and NK cells
 - (D) T-Cell and Eosinophil
- (1.2) T-cells are matured in which organ
- (A) Glands
 - (B) Lymph
 - (C) Thymus
 - (D) Bone marrow
- (1.3) Gene for IgM -
- (A) Alpha
 - (B) epsilon
 - (C) mu
 - (D) gamma
- (1.4) Formation of Ab-Ag lattice depends on
- (A) Valency of Ab
 - (B) A+C
 - (C) Valency of Ag
 - (D) Fab
- (1.5) CD4+ related to
- (A) MHC-I
 - (B) MHC-II
 - (C) MAC-I
 - (D) All

(1.6) Examples of phagocyte cells

(1.7) Types of Antigens

(1.8) Expand - TCR

(1.9) Expand - ELISA

(1.10) Expand - APC

(1.11 - 1.15) Match the following :

- | | |
|-------------------|-------------|
| (A) T-cells | (1) Allergy |
| (B) B-cells | (2) Epsilon |
| (C) Mast cells | (3) TCR |
| (D) IgE | (4) MHC-I |
| (E) T-helper cell | (5) BCR |

2 Answer any five questions. Each carries **3×5=15**
3 marks :

(2.1) Define cell mediated immunity

(2.2) Describe structure of IgE

(2.3) Define Antigen-Antibody interaction

(2.4) Describe immunology

(2.5) Explain functions of spleen

(2.6) List out secondary organ of immune system

(2.7) Draw diagram of Immunoglobulin

3 Answer any four questions. Each carries 5 marks : $5 \times 4 = 20$

(3.1) Explain types and role of T-cells in immune system.

(3.2) Explain bone marrow structures and functions.

(3.3) Describe diversity of antibody

(3.4) Describe antigenicity and antigen binding site

(3.5) Explain Agglutination

4 Answer any two questions. Each carries 10 marks : $10 \times 2 = 20$

(4.1) Explain antibody types and structure with diagram.

(4.2) Describe T-cell activation and differentiation

(4.3) Describe types and role of cells in immune system.
