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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(BT) (2012 to 2017) (Sem.-5)**  
**IMMUNOLOGY & IMMUNOTECHNOLOGY-II**  
Subject Code : BTBT-502  
M.Code : 70503

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

**SECTION-A****Q1) Write briefly :**

- a) Granzyme
- b) Extravasation
- c) Positive selection of T cells
- d) Sequestered antigens
- e) Primary immunodeficiency
- f) Graft vs. host reactions
- g) Serum sickness
- h) Interleukins
- i) Central tolerance
- j) Tumor associated transplantation antigen

### SECTION-B

- Q2) Mention the different properties of cytokines.
- Q3) How cytotoxic T cells kill the target cells?
- Q4) How HLA typing is carried out?
- Q5) Describe the autoimmune response generated in systemic lupus erythematosus.
- Q6) How does B cell get activated?

### SECTION-C

- Q7) Write the classical pathway of complement system. Mention the function of complement system.
- Q8) Describe the type I and III hypersensitive reactions.
- Q9) Explain in detail immune responses involved to control the bacterial infection with examples.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**