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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(BT) (2011 Onwards) (Sem.-4)
IMMUNOLOGY AND IMMUNOTECHNOLOGY-I
Subject Code : BTBT-403
Paper ID : [A1168]

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) PRR and PAMP.
- b) Haptens.
- c) GALT.
- d) Recombinant interferons.
- e) Ouchterlony method.
- f) Structure of Class II MHC.
- g) Class Switch.
- h) Hypervariable regions.
- i) ADCC.
- j) Microbiological barrier of innate immunity.

SECTION-B

- Q2) Write about the Western blotting technique.
- Q3) Illustrate the role of T helper cells in B cell activation.
- Q4) Illustrate the oxygen dependent and independent mechanism of Macrophages.
- Q5) Summarize the different characteristic of antigen.
- Q6) Write about the structure and function of Antibody.

SECTION-C

- Q7) Discuss the recombinant vector, recombinant antigen and DNA vaccine. Also provide the current scenario of these vaccines.
- Q8) Explain the role and killing mechanism of Cytotoxic T cell (CTL) and NK cells. Also write the role of dendritic cells in the activation of CTL.
- Q9) Describe the different steps of ELISA. How competitive ELISA is different from indirect ELISA?