



End Term Examination (December 2019)

School: School of Engineering
Course: Immunology and Cancer Biology

Program: B.Tech. Biotechnology (Medical)
Course Code: BTE308

Semester: V

Max Marks: 40

Duration (mins): 90

- Q1. Answer the following questions. (Each carries 1 mark) [5]
- a) Name one proto-oncogene.
 - b) Name two recombinant-vector vaccines.
 - c) What is systemic lupus erythematosus?
 - d) Expand IDDM.
 - e) Define autoimmunity.
- Q2. Give role of DNA as vaccine. [2]
- Q3. Name five families of cytokine receptors. [3]
- Q4. Discuss the immune response against extracellular and intracellular bacteria. [5]
- Q5. Discuss different categories of cancer associated genes in detail. [5]
- Q6. Explain and compare four structural families of cytokines with examples. [5]
- Q7. Explain the mechanisms of humoral and cell-mediated immune responses to viruses. [5]
- Q8. What are tumor antigens? Name and explain various factors that induce tumor antigens with examples. [5]
- Q9. Elucidate some cancer immunotherapy with examples. [5]