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Total No. of Pages : 02

Total No. of Questions : 08

M.Tech.(Bio Tech.) (Sem.–2)

APPLIED IMMUNOLOGY

Subject Code : MTBT-102

M.Code : 23002

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

Q.1 a) Summarize the adaptive immune reactions that takes place in controlling bacterial infections.

b) Write about the immunological privileged sites.

c) Discuss the graft versus host reactions.

Q.2 a) Describe the important steps of western blotting. Write the application of western blotting.

b) Discuss the biosensor assay which is used to assess the interaction of ligand and receptor?

Q.3 a) Explain the hypersensitive reaction which is associated with serum sickness.

b) Discuss **any two** cancer immunotherapy approaches.

Q.4 a) There is recent trend in peptides based vaccines. How these vaccine are prepared? Write the role of HLA in consideration of peptide vaccine.

b) With examples, explain the role of adjuvants.

c) How conjugate vaccines are prepared?

Q.5 a) Discuss the different basis of graft rejection.

b) Describe the different phenomenon by which tumor gets evaded from immune system?

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Q.6 a) Write the role of different interleukins.

b) Mention the role of different molecular chaperons in class I MHC stabilization.

c) How super-antigen works? Also give examples.

d) Write on hapten carrier system.

Q.7 a) Describe the different steps involved in ELISA. Also explain competitive ELISA.

b) Differentiate between active and passive immunization.

c) How chimeric antibody is generated?

Q.8 a) How T helper is associated with B cell activation? Also write about ADCC.

b) Write about the affinity maturation.

c) Discuss the Tonegawa and Nozumi's contribution in antibody diversity.

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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.

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