

Paper Code: MTBT011

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M. TECH.
FIRST SEMESTER THEORY EXAMINATION, 2016-2017
IMMUNOLOGY AND VACCINE TECHNOLOGY

Time: 3Hours

Max. Mark: 70

Note: Attempt all questions.

1. Attempt any two parts of the following:- 7x2= 14
 - (a) What are the characteristics of acquired immunity? Briefly describe.
 - (b) Describe the genetic organization of human MHC genes.
 - (c) Write short note on hematopoiesis.

2. Attempt any two parts of the following:- 7x2= 14
 - a. Describe the generation of antibody diversity and specificity.
 - b. What is protein de-immunization? Explain the exogenous antigen processing pathway.
 - c. Explain the following:
 - i) Self and non-self-discrimination
 - ii) Primary and secondary immune response

3. Attempt any two parts of the following:- 7x2= 14
 - a. What is immuno-compromised host? Discuss the guidelines for their vaccination.
 - b. Describe the reverse vaccinology approach along with advantages and disadvantages.
 - c. Write short note on:
 - i) Peptide vaccines
 - ii) DNA vaccines

4. Attempt any two parts of the following:- 7x2= 14
 - a. Give a brief note on historical events related to vaccines and immunizations.
 - b. How are the vaccines licensed? Discuss the process.
 - c. Write a short note on success story of hepatitis-B vaccine production.

5. Attempt any two parts of the following:- 7x2= 14
 - a. Give a detail note on industrial manufacturing of vaccines and safety issues.
 - b. Explain the regulation of vaccine production in developing countries.
 - c. Write short note on evolution of adjuvants.