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Roll No. [illegible]

B TECH
(SEM IV) THEORY EXAMINATION 2017-18
IMMUNOLOGY (RBT-402)

(Time: 3 Hours) (Total marks: 70)

SECTION – A

[2x7=14]

Note: Attempt all parts. All parts carry equal marks.

a) .What do you understand by immunity? What are the types of immunity?
b) Name the defensive barriers of innate immunity.
c) What are interferons?
d) Give two differences between adaptive and innate immunity.
e) What is the role of MHC in immune response? Name the types of MHC molecule.
f) Give two differences between B lymphocyte and T lymphocyte.
g) What is the role of immunoglobulins in immune response?

SECTION – B

[3x7=21]

Note: Attempt any 3 parts. All parts carry equal marks.

a) What is meant by inflammation? What are its types?
b) Explain MALT. What is its role in immune system?
c) Explain the various primary lymphoid organs with their proper functions.
d) Explain how Cell Mediated Immunity is sometimes harmful for our body.
e) Explain Hematopoiesis. What is the role of the Hematopoietic Stem Cell?

SECTION – C

Note: Attempt all parts. All parts carry equal marks.

1. Attempt any one part (07 marks)

a. Elucidate the principle of RIA.
b. Explain how antigen is processed and presented on the surface of MHC molecule.

2. Attempt any one part (07 marks)

a. What are complimentary proteins? Describe their role in regulation and activation of humoral response.
b. Name the different cells of the immune system. Discuss the roles of T cell, B cell and Natural killer cells in detail.

3. Attempt any one part (07 marks)

a. Discuss the structure and role of MHC molecule in detail.
b. What is meant by hypersensitivity? Discuss any two hypersensitive reactions.

4. Attempt any one part. (07 marks)

a. What are the various sub-types of an antibody? Discuss their characteristic features and functions.

b. Differentiate between Radial immunodiffusion and double immunodiffusion techniques.

(07 marks)

5. Attempt any one part.

a. Discuss the concept of ELISA. Explain any two types of the technique.

b. What are hybridomas? How monoclonal antibodies are produced by hybridoma technology?