

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
IMSC/M.Sc., Winter2019-20 Examination

Semester: 2/8**Subject Code: 11201152****Subject Name: Biology of the immune system****Date: 10/12/2019****Time: 2:00am to 4:30pm****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type(Each of 04 marks) (08)**
(a) Describe the Characteristics and functions of T and B lymphocytes
(b) Explain humoral and cell mediated immune response
- Q.1. B) Answer the following questions (Any two)**
(a) Short note(Each of 02 marks) (04)
1. Note on T cell and B cell receptors
2. List the roles of organs in immune system
(b) Short note on role of MHC in immune response (04)
(c) Differentiate the innate and adaptive immunity (04)
- Q.2. A) Answer the following questions.**
(a) Short note (Each of 02 marks) (04)
1. Draw the structure of Secretory Immunoglobulin
2. What is complement activation? List their biological consequences
(b) Explain immunoglobulins and their biological activity (04)
- Q.2. B) Answer the following questions (Any two)**
(a) Do as directed(Each of 01 marks) (03)
1. Define Allotype
2. Full form of APC's
3. Define Cytokines
(b) Short note on Antibody diversity (03)
(c) Short note on Interleukins (03)
- Q.3. A) Essay type(Each of 04 marks) (08)**
(a) Describe the method of ELISA with their applications
(b) Explain Hypersensitivity reactions with their types
- Q.3. B) Answer the following questions (Any two)**
(a) Short note (Each of 02 marks) (04)
1. List Autoimmune Diseases
2. Note on RIA
(b) Short note on Tumor associated antigens (04)
(c) Short note on Immunoelectrophoresis (04)
- Q.4. A) Answer the following questions.**
(a) Short note (Each of 02 marks) (04)
1. What is Hybridoma technology? List their applications
2. Define Tissue transplantation. Give their applications.
(b) Short note on immunofluorescence. (04)
- Q.4. B) Answer the following questions (Any two)**
(a) Write the full forms (Each of 01 marks) (03)
1. MHC
2. FACS
3. APC
(b) Short note on Agglutination reactions (03)
(c) Short note on Immunosuppressive agents (03)