

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc., Summer 2017-18 Examination

Semester: 3
Subject Code: 11101202
Subject Name: Immunology

Date: 24/05/2018
Time: 10:30am to 1:00pm
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/ Brief note. (4x2) (Each of 04 marks) (08)**
 (a) Write a note on Innate Immunity
 (b) Write a note on development and maturation of B-cells
- Q.1. B) Answer the following questions. (Any two)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. Draw an anatomically labelled diagram of Thymus
 2. Draw an anatomically labelled diagram of Spleen
 (b) Short note on Acquired Immunity (04)
 (c) Short note on Immunological disorders (04)
- Q.2. A) Answer the following questions.**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. Functions of Neutrophils
 2. Functions of Macrophages
 (b) Short note on Phagocytosis (04)
- Q.2. B) Answer the following questions. (Any two)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Define: Antigen
 2. Define: Adjuvants
 3. Define: Affinity
 (b) Short note on Radial Immunodiffusion (03)
 (c) Short note on ELISA (03)
- Q.3. A) Essay type/ Brief note. (4x2) (Each of 04 marks) (08)**
 (a) Short note on Structure of Immunoglobulins
 (b) Short note on Agglutination based reactions
- Q.3. B) Answer the following questions. (Any two)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. Explain isotypes and allotypes
 2. Explain properties of epitopes
 (b) Short note on Vaccines (04)
 (c) Short note on Type-I hypersensitivity (04)
- Q.4. A) Answer the following questions.**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. Write a note on IgM
 2. Write a note on IgE
 (b) Short note on RIA (04)
- Q.4. B) Answer the following questions (Any two)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Define Recombinant vaccines
 2. Define MMP
 3. Define BCG
 (b) Short note on Cytokines (03)
 (c) Short note on Immunoelectrophoresis (03)