

Question Paper

Exam Date & Time: 18-Jun-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.Sc.MEDICAL LABORATORY TECHNOLOGY DEGREE EXAMINATION-JUNE 2024
SUBJECT: MLT2103- IMMUNOLOGY AND IMMUNOHEMATOLOGY
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

Draw diagrams wherever necessary.

- 1) Define and classify hypersensitivity. Explain the mechanism of IgE mediated hypersensitivity and clinical manifestations of anaphylaxis (20)
(2+2+8+8 = 20 marks)
- 2) Explain the genetics of Rh blood group system and inheritance of D antigen. Illustrate the characteristics of the Rh antibodies with their clinical significance (20)
(5+5+5+5 = 20 marks)
- 3) Classify immune deficiency disorders. Explain agammaglobulinemia and D George syndrome. (10)
(2+2+6 = 10 marks)
- 4) Explain the antigens, antibodies, and weak variants of ABO blood system. (10)
(4+4+2 = 10 marks)
- 5A) Define immunoglobulin. Explain the structure and function of immunoglobulin. (5)
- 5B) Explain direct and indirect Coombs tests (5)
- 5C) Define immunization. Explain the passive and active immunization with example (5)
- 5D) Explain the lab investigations in hemolytic disease of new born (5)
- 5E) Explain the components of innate immune system. (5)
- 5F) Explain the activation of complement proteins by alternative pathway. (5)
- 6A) Define monoclonal antibody. Name the technique used for the preparation of monoclonal antibodies. (2)
- 6B) What is serum sickness? (2)
- 6C) Explain the characteristics of Duffy blood group system (2)
- 6D) Define precipitation reaction. Give one example. (2)
- 6E) List the organs of immune system (2)

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