

Question Paper

Exam Date & Time: 15-May-2024 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

Immunotechnology [PBT-MPB202T -S1]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

Answer the following (10 marks x 5 = 50 marks)

- 1) Discuss the factors that affect infection. Explain the structure and functions of the thymus. (10)
- 2) Classify and discuss the mechanism of complement components. (10)
- 3) What is humoral immunity? Explain the proliferation and effector phase associated with the development of humoral response. (10)
- 4) Classify vaccines based on the type of immunogen present in the preparation. Give examples for each type. Explain the process and the mechanisms involved in attenuation of a pathogenic microorganism. (10)
- 5) Classify cancer based on the embryonic origin of the tissue from which the tumor is derived. Sketch the sequence of events that occurs with the generation of malignancy and metastasis. (10)

SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks)

- 6) What are immunoglobulins? Write short notes on the type of immunoglobulin that crosses the placental barrier. (5)
- 7) Explain the different antigen-antibody interactions. How do they help in clearing the antigen from the system? (5)
- 8) Define Hypersensitivity reaction. Elaborate the mechanism associated with Type I hypersensitivity reactions. (5)
- 9) Explain the steps involved in the production of hybridomas used for mAbs production. (5)
- 10) Explain the general principle involved in Immunoelectrophoresis with special emphasis on precipitin arc (5)

-----End-----