

Exam Date & Time: 19-Dec-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Cellular and Molecular Pharmacology [PHA-MPL104T - S2]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Explain the role of tRNA in translation. Describe the terms reading frame, start codon, stop codon and Kozak sequence. (10)
- 2) Discuss the signal transduction process occurring through JAK/STAT pathway. (10)
- 3) Give an overview of biosimilars and its fate in India (10)
- 4) Describe the polymorphisms affecting drug metabolism. (10)
- 5) Elaborate the various equipment required for setting up a cell culture laboratory. (10)

SECTION - B

Answer all the questions.

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

- 6) Describe the components involved in miRNA biogenesis. (5)
- 7) What is the function of calcium ion as a secondary messenger? (5)
- 8) Explain the types of immuno-therapeutics employed for treatment of cancer. List its clinical applications. (5)
- 9) How does gene therapy helps to treat pediatric patients with spinal muscular atrophy, a rare disease and leading genetic cause of infant mortality. (5)
- 10) Describe different types of PCR. (5)

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