

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.

Modern Bioanalytical Techniques [PCH-MPA202T -S1]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) What is bioanalysis? Explain the main components of bioanalytical methods. Discuss the need of biopharmaceutical analysis. (10)
- 2) Explain the various biopharmaceutical factors affecting drug bioavailability. With neat diagram, explain rotating bottle method and peristalsis method of dissolution testing (10)
- 3) Discuss in detail the importance and application of toxicokinetic studies (10)
- 4) What is cell viability assay? Explain the common methods of viability assays (10)
- 5) What are human liver microsomes? Give their advantages and disadvantages. Give the protocol for liver microsome preparation (10)

SECTION - B

Answer all the questions.

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

- 6) What are biological samples? Give examples. Discuss protein precipitation and the types of protein precipitation (5)
- 7) Explain in vitro dissolution and drug release testing methods (5)
- 8) Explain pharmacokinetic drug interactions with suitable examples (5)
- 9) What is cryopreservation of cells? Discuss the application of cryopreservation (5)
- 10) Explain the purpose of bioavailability studies (5)

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