

Question Paper

Exam Date & Time: 22-Nov-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Modern Pharmaceutical Analytical Techniques [PQA-MIP101T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Explain the Qualitative applications of UV-Visible spectroscopy. (10)
- 2) a) Why only certain chemical compounds are fluorescent in nature? (10)
b) Comment on the problems of sample handling in IR spectroscopy. Suggest the remedies to overcome the same.
c) Explain pressed pellet technique of sample handling in IR spectroscopy. (4+3+3 marks)
- 3) Discuss in detail NMR instrumentation with the help of neat schematic diagram (10)
- 4) Discuss in detail about the time of flight and write a note on HSRM (10)
- 5) Explain all the modules of the quaternary gradient low-pressure HPLC system with the help of a schematic diagram (10)

SECTION - B

Answer all the questions.

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

- 6) What is in-situ densitometry in HPTLC? Explain the calibration curve method of quantitative estimation using HPTLC. (5)
- 7) Explain the instrumentation of DSC (5)
- 8) Explain the methods for the detection of equivalence point in Potentiometry in brief (5)
- 9) List the applications of capillary zone electrophoresis and Micellar electrokinetic chromatography (5)
- 10) Compare the advantages of ELISA with Radioimmuno assay. (5)

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