

Question Paper

Exam Date & Time: 07-May-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

III Year Pharm D
University Examination May 2024
Pharmaceutical Analysis [PQA 3.2T-S1]

Marks: 70

Duration: 180 mins.

A: Long Answer Questions

Answer all the questions.

Draw diagrams and Chemical Reactions wherever necessary

- 1) List the qualitative applications of UV Visible spectroscopy. (4)
 - a)
 - b) Explain the principle in the colorimetric estimation of sulpha drugs using Bratten Marshall reagent. Explain the role each reagent in the same. (6)
- 2) List the factors affecting electrophoresis (4)
 - a)
 - b) Write and explain the formula to calculate specific optical rotation for solids and liquids (6)
- 3) Discuss in detail about validation of analytical methods as per ICH Q2 R1 guidelines (10)

B: Short Answer Questions

Answer all the questions.

- 4) Explain the working principle of standard hydrogen electrode with the help of neat labelled diagram (5)
- 5) Explain the titration of strong acid vs weak base by conductometric method (5)
- 6) Write the factors affecting TLC (5)
- 7) Explain the working principle of densitometer (5)
- 8) Explain the principle in the assay Thiamin by fluorimetry (5)
- 9) Explain briefly the factors affecting chemical shift. (5)

C. Answer the Following

Answer all the questions.

- 10) What is group frequency region of IR spectroscopy? Write its use. (2)
- 11) How Electron spin resonance spectroscopy is different from Nuclear magnetic resonance spectroscopy? (2)
- 12) List the applications of Electron spin resonance spectroscopy (2)
- 13) List the applications of paper electrophoresis (2)
- 14) What is single and double focusing Mass spectrometer (2)

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