

Question Paper

Exam Date & Time: 06-Jul-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

IV Year Pharm D/ I Pharm D Post Baccalaureate
University Examination April 2023

Pharmaceutical Analysis [PQA 3.2T-S1]

Marks: 70

Duration: 180 mins.

A: Long Answer Questions

Answer all the questions.

Draw diagrams wherever necessary

- 1) Discuss the principle and mechanisms of separation in chromatography. (5)
 - a)
 - b) Analyse the importance of van-Deemter equation in improving the efficiency of chromatographic separation. (5)
- 2) Explain the harmonization of new guidelines by formal ICH procedure. (10)
- 3) Explain the electronic transitions in UV spectroscopy with suitable example. (10)

B: Short Answer Questions

Answer all the questions.

- 4) Explain the principle of "Glass electrode" with necessary equations and diagrams. (5)
- 5) Explain the working of powder crystal method using neat schematic diagram. (5)
- 6) Explain the background correction techniques in atomic spectroscopy. (5)
- 7) Explain chemical shift, shielding and de-shielding effect using suitable examples. (5)
- 8) Explain the factors influencing the results of thermal analysis. (5)
- 9) Explain the instrumentation of Polarimeter using neat schematic diagram. (5)

C. Give Reasons for the Following

Answer all the questions.

- 10) Why oxygen removal is essential in polarographic analysis? (2)
- 11) Why the concentration of electrolyte solution should always be constant while performing the gel electrophoresis? (2)
- 12) Why sodium chloride is used as optical material in Infrared spectroscopy? (2)
- 13) Why temperature cross-section is uniform in plasma discharge of an Inductively coupled plasma source? (2)
- 14) Why crystalline compounds show Bragg's diffraction pattern in a XRD spectra? (2)

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