

Question Paper

Exam Date & Time: 27-Nov-2017 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES
END SEMESTER THEORY EXAMINATIONS - NOVEMBER 2017

PROGRAM : MPHARM SEMESTER I

DATE : 27-11-2017

TIME : 2:00PM - 5:00PM

(Common Paper for the following specializations: Pharmaceutics, Industrial Pharmacy, Pharmaceutical Chemistry, Pharmaceutical Analysis, Pharmaceutical Quality Assurance, Pharmaceutical Biotechnology, Pharmacology and Pharmacognosy)

Modern Pharmaceutical Analytical Techniques [PQA-MQA101T]

Marks: 50

Duration: 180 mins.

a

Answer all the questions.

Answer the following (5 marks x 8 = 40 marks)

- 1) Write a note on Ultra-Performance Liquid Chromatography. (5)
- 2) With the help of neat and labelled diagram, discuss the working of thermobalance employed in TGA. (5)
- 3) List the advantages ELISA and potentiometric titrations (5)
- 4) Explain the qualitative applications of UV/Visible spectroscopy in brief. (5)
- 5) Explain the working of Golay cell detector (5)
- 6) Explain the principle and applications of micellar electrokinetic chromatography (5)
- 7) Explain the information obtained from the proton NMR spectrum (5)
- 8) What are mass analyzers? Classify them with examples and explain any one (5)

b

Answer the following with specific answers (2 marks x 5 = 10 marks)

- 9) What is void volume and void time in HPLC? (2)

A)

- B) List the applications of X ray diffraction. (2)
- C) List the structural requirements for a molecule to exhibit fluorescence. (2)
- D) List the types of nebulizers used in AAS. (2)
- E) How simplification of complex proton NMR spectra can be achieved? (2)

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