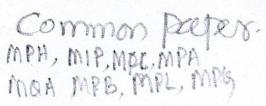
Exam Date & Time: 25-Nov-2019 (02:00 PM - 05:00 PM)





MANIPAL ACADEMY OF HIGHER EDUCATION

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

Modern Pharmaceutical Analytical Techniques [PQA-MIP101T - S3]

Marks: 75 Duration: 180 mins.

SECTION - A

Answer all the questions. Answer the following (10 marks x = 50 marks) 1) Explain the quantitative UV methods for single component. (10)2) a) Explain the standard addition method for the quantitative determination of metal ions by flame photometry. b) How the thiamine, Phenytoin, and aluminium are converted in to fluorescent (10)compounds? (4+6) a) How the number of neighboring protons for each type is identified using PNMR 3) spectrum? Explain with suitable example (10)b) How ¹³C NMR is different from ¹³H NMR? Explain. (5+5) Explain with suitable example the fragmentation rules in electron impact mass 4) spectroscopy. (10)5) Heptane and toluene were separated with retention times of 15.4 and 16.5 min respectively on a 1.0 meter packed column. An unretained species passed through the column in 1.8 min. The peak widths measured at the base were 1.15 min for heptane and 1.20 min for toluene. a) Calculate the resolution between the peaks. b) Calculate the number of theoretical plates for heptane and toluene. (10)c) Calculate the plate heights for heptane and toluene. d) Calculate what column length will be necessary to achieve a resolution of 1.5 on this column. e) Calculate the capacity factor for heptane and toluene.

SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks) 6) Explain the working of Golay cell detector (5) 7) List the advantages of ELISA over Radio immunoassay. (5) 8) Explain the care and rejuvenation of Glass electrode. (5)

11/25/2019, 4:52 PM

	A sample of pesticide is analyzed by gas chromatography. A 0.1 micro litre injection of a standard containing 0.234 mg/l gives a peak of area 34873. The same volume injection of a sample solution gives an area of 39945. What is the concentration in %w/v of the pesticide in the sample solution?	(5)
10)		

Discuss in detail the pharmaceutical applications of thermoanalytical techniques (5)

----End----

2019-20-Makeup Exam - I Sem

mom - 6 specification about:sredoc

Duration: 180 mins.

Exam Date & Time: 28-Dec-2019 (10:00 AM - 01:00 PM)

(m)

- MPC - MPA - MPD - MPC

MIP

MANIPAL ACADEMY OF HIGHER EDUCATION

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

Modern Pharmaceutical Analytical Techniques [PQA-MIP101T]

SECTION - A

Answer all the questions. Answer the following (10 marks x = 50 marks) Explain the Instrumentation for double beam UV/Visible spectrometer in brief. 1) (10)a) Explain the interferences in flame photometry in brief 2) b) Explain the special methods of sample handling for solids in IR spectroscopy (10)(5+5 marks)What is chemical shift? Explain the factors affecting chemical shift with suitable 3) (10)example. Discuss the ionization techniques in Mass spectrometry. 4) (10)a) Differentiate TLC and HPTLC 5) (10)b) Explain the derivatization in GC with examples (5+5) **SECTION - B** Answer all the questions. Answer the following (5 marks x = 25 marks) List the qualitative applications of UV/Visible spectroscopy. 6) (5)Explain the experimental requirements for ELISA 7) (5)

List the applications of Differential scanning calorimetry and Differential thermal

Derive an expression for Bragg's equation

Explain the pre and post column derivatization in HPLC

----End----

analysis

8)

9)

10)

Marks: 75

(5)

(5)

(5)