R13

Code No: 218AC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Pharmacy IV Year II Semester Examinations, April - 2018
PHARMACEUTICAL ANALYSIS – II

Time: 3hours Max.Marks:75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A

(25 Marks)

1.a) Define chromophore [2]
b) Explain lamberts Law. [3]
c) Explain about twisting vibration in IR spectroscopy. [2]
d) Write the principles of atomic absorption spectroscopy. [3]
e) What is the role of TMS in NMR? [2]
f) What is ^{13}C NMR spectroscopy? [3]
g) Define molecular ion peak. [2]
h) Write the role of mass spectra in structure elucidation of a molecule. [3]
i) Explain isoosmotic flow. [2]
j) What is C-8 column? [3]

PART B

(50Marks)

2.a) Explain in details with examples about the Woodward-Fieser rule for the determination of λmax of a molecule.
b) Explain the deviations in Beers-Lamberts law [5+5]

OR

3.a) Explain the theory and quenching in Flourimetry.
b) Write about the principles of various detectors used in UV-Visible double beam spectroscopy, with schematic diagram. [5+5]

4. Explain the theory and applications of Atomic absorption spectroscopy . [10]

OR

5. Write in details about the various types of sample preparation techniques in IR spectroscopy . [10]

6. Draw a ^1H NMR spectra of "Indole 2, 3 dione" and how you explain the spin- spin splitting of aromatic hydrogen in "indole 2,3 dione" . [10]

OR

7.a) How do you interpret the ^1H NMR spectra of , -CHO, -COOH and $-NH_2$.
b) Write a note on deshielding. [5+5]

8.a) Write the basic principles for the interpretations of mass spectra.
b) Explain the basic principle of mass spectroscopy.

OR

9.a) Draw a mass spectrum of Benzene and point out the base peak and molecular ion peak.
b) Write about the instrumentation of mass spectroscopy. [5+5]

10. Write about the various types of columns used in Gas liquid chromatography.

OR

11. Explain the theory and instrumentation of capillary electrophoresis.