Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 10

B.Pharma (2011 to 2016) (Sem.–8)

PHARMACEUTICAL ANALYSIS – III

Subject Code : BPHM-802

Paper ID : [72297]

Time : 3 Hrs. Max. Marks : 80

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.**

SECTION-A

Q1 Answer briefly :

a) What is red shift in UV?

b) What is dismagnetic anisotropy?

c) Explain the terms fluorescence and phosphorescence.

d) Explain circularly polarized light.

e) Write down the significance of finger print region in IR.

f) Why symmetric stretch of CO_2 molecule is inactive in IR?

g) Define base peak and molecular ion peak in MS.

h) What is the use of TMS in NMR spectroscopy?

i) Explain the term optical rotatory dispersion.

j) Write down the basic principle of polarimetry.

k) What is mull method in IR?

1) Why $CDCl_3$ is used as a solvent in NMR spectroscopy instead of $CHCl_3$?

m) Is flame photometry emission spectroscopy? Comment.

n) Write two pharmaceutical applications of AAS.

o) Explain the term space lattice.

SECTION-B

Q2 What is an electromagnetic spectrum? Name the various spectroscopic methods based on electromagnetic radiations.

Q3 Derive Beer-Lambert law for quantification of compounds by UV spectroscopy.

Q4 Discuss the applications of X-ray spectroscopy in pharmaceutical analysis.

Q5 Describe working of a Quadrupole Mass analyser.

Q6 Explain Spin-spin coupling in ^{1}HNMR with appropriate examples.

SECTION-C

Q7 Write an account of diffraction of X-ray by crystals.

Q8 Explain the working principle of flame photometer by drawing its block diagram. Give quantitative pharmaceutical applications of flame photometry.

Q9 Explain the following in MS :

a) McLafferty rearrangement

b) Tropyliumion

c) Isotope peaks

Q10 What are the various instruments used in infrared spectroscopy? Why a double beam spectrophotometer is preferred? Draw a schematic diagram of such instrument. Explain its working describing functioning of individual parts.