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B.Pharma (2011 to 2016) (Sem.-8)
PHARMACEUTICAL ANALYSIS – III
Subject Code : BPHM-802
M.Code : 72297

Max. Marks : 80

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.**

Q1 Answer briefly :

- (a) What is the function of grating monochromators in spectrophotometer?
- (b) What are electromagnetic radiations?
- (c) Explain allowed transition versus forbidden transition.
- (d) Define bathochromic shift.
- (e) Define spectroscopy.
- (f) Explain triplet excited state of molecule giving diagram.
- (g) Define vibrational frequency.
- (h) Define interplanar spacing in crystal system.
- (i) Explain nuclear magnetic moments.
- (j) Define chemical shift.
- (k) Explain nitrogen rule in mass spectrometry.

- (l) Define atomization. State two methods that are used to atomize a sample.
- (m) Explain purpose of Hollow Cathode lamp in atomic absorption spectroscopy.
- (n) Define molecular ion peak in mass spectrum
- (o) What are Miller indices?

SECTION-B

- 2. Explain the Beer's law. Describe factors responsible for deviation from Beer's law.
- 3. Discuss structure requirement for fluorophore. What are the factors affecting fluorescence?
- 4. Explain principle of infrared spectroscopy. What information can be obtained from IR spectroscopy?
- 5. Discuss principle and applications of polarimeter.
- 6. What is the principle of NMR spectroscopy? Discuss spin-spin splitting.

SECTION-C

- 7. Describe instrumentation and application of flame photometry.
- 8. Give an account of principle and applications of atomic absorption spectroscopy.
- 9. What is diffraction of x-ray by crystals? Discuss in detail Bragg's equation and its applications.
- 10. Explain construction and analytical applications of mass spectrometry.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.