

FACULTY OF PHARMACY

**M. Pharmacy (Pharmaceutical Chemistry) II-Semester (PCI) (Main) Examination,
August 2019**

Subject: Advanced Spectral Analysis

Time: 3 Hrs

Max. Marks: 75

Note: Answer any five questions. All questions carry equal marks.

- 1 (a) Discuss Woodward Fieser rule with examples ? Discuss the calculation of λ_{\max} for cyclic dienes and unsaturated carbonyl compounds with examples . (8+7)
(b) Discuss how IR spectra is useful in structural elucidation of organic compounds with any four structures .
- 2 Write a detailed account on : (8+7)
(a) 1-D NMR
(b) INADEQUATE
- 3 (a) Discuss McLafferty rearrangement and Ring rule.
(b) Give the mass fragmentation rule for amine, carbonyl compounds and halides. (7+8)
- 4 Explain the Principle, instrumentation and applications of following (8+7)
(a) HPTLC (b) GC-MS
- 5 Give the instrumentation and applications of following : (8+7)
(a) DTA (b) DSC
- 6 Write a short note on : (8+7)
(a) HPTLC
(b) Super critical fluid chromatography
- 7 Explain the Principle and applications of following : (8+7)
(a) COSY (b) HECTOR
- 8 Write a short note on : (8+7)
(a) ELISA
(b) Bio assay of digitalis
