M Pharm – Common Paper
M Pharm Semester -I End-Semester Make up Examination January 2023

Course Code PQA-MQA 101T Course Title: Modern Pharmaceutical Analytical Techniques

Date: 16.01.2023   **Duration**: - 3 hr   **Max. Marks**: 75

Instructions: Answer ALL questions.

Answer the following	10 marks × 5 = 50 marks
Question	**Marks**
1. Explain the qualitative applications of UV Visible spectroscopy.	10
2 Explain the sample handling in IR Spectroscopy.	10
4 Explain the principle and instrumentation of NMR spectroscopy	10
5 Discuss in detail about any two analyzers used is mass spectroscopy	10
6 Explain the principle and working of any two detectors used in HPLC	10

Answer the following	5 marks × 5 = 25marks
Question	**Marks**
6A. Explain the various steps of paper chromatography	5
6B. Explain DSC in detail	5
6C. Write the advantages and limitations of potentiometric titrations over titrations involving visual indicators.	5
6D. Write the principle and applications of curtain paper electrophoresis.	5
6E. Derive an expression for Bragg's law. List the application of X-ray crystallography. (3+2 marks)	5