

End Semester Examination (2021-22)-Odd Semester

M.Sc. (Chemistry) I Year (I Sem.)

Course Name: Analytical Chemistry

Code: MCY1005

Time: 02 Hours

Max Marks: 60

University Roll No.

(To be filled by the Student)

Note: Please read instructions carefully:

- a) The question paper has 03 sections and it is compulsory to attempt all sections.
- b) All questions of Section A are compulsory; questions in Section B and C contain choice.

Section A: Very Short Answer type Questions		BL	CLO	Marks (10)
Attempt all the questions.				
1.	Distinguish between accuracy and precision.	BL 4	CLO1	02
2.	What is determinate and indeterminate error?	BL 1	CLO2	02
3.	What are the criteria's for Good Laboratory Practices?	BL 1	CLO2	02
4.	Discuss the basic principles of chromatography.	BL 2	CLO3	02
5.	Describe the applications of GC-MS.	BL 2	CLO4	02
Section B: Short Answer Type Questions		BL	CLO	Marks (30)
Attempt any 03 out of 06 questions.				
1.	Discuss the significance of pH in analysis.	BL 2	CLO1	10
2.	What are the buffers and their importance in chemical analysis?	BL 1	CLO2	10
3.	How will you reduce errors? Discuss the benefits of quality system.	BL 1	CLO4	10
4.	What are the applications of column chromatography in research?	BL 1	CLO3	10
5.	Distinguish between quality audit and quality review.	BL 4	CLO1	10
6.	What do you mean by instrumentation validation? Why it is necessary?	BL 1	CLO4	10
Section C: Long Answer Type Questions/Case Study		BL	CLO	Marks (20)
Attempt any 01 out of 03 questions.				
1.	Explain the role of total quality management in analytical chemistry.	BL 2	CLO1	20
2.	What is the solvent treatment system in HPLC? Explain isocratic and gradient systems.	BL 1	CLO4	20
3.	What are the detectors? Explain the operative principles of coulometric, thermionic and NP detectors.	BL 1	CLO3	20