

M.Sc.(Chem.) Semester - 2 (CBCS) Examination
August/September -2020 [NEW COURSE]
Analytical Chemistry (CORE)

Time: 2:00 Hours

Marks: 56

Instructions:

1. Figure to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any four of the following questions.

Q1 (A) Answer the following questions**04 Marks**

- 1 Enlist method validation Parameters. 2
- 2 Define the following terms: (i) median (ii) accuracy 2

Q1 (B) Answer any two questions out of three**10 Marks**

- 1 What is the ideal value of co-relation coefficient? Calculate the value of co-relation coefficient for following observations 5

Concentration (ppm)	25	30	35	40	45	50	55
Area	55	125	177	232	300	353	400

- 2 Give an account of Precision Studies. 5
- 3 Define and Explain with graphical representation: (i) Limit of Detection (ii) Limit of Quantification 5

Q2 (A) Answer the following questions**04 Marks**

- 1 Draw schematic diagram of dissolution apparatus 2
- 2 Which types of compounds are responsible for high amount of ROI in finished pharmaceutical products? 2

Q2 (B) Answer any two questions out of three**10 Marks**

- 1 Give the equation to calculate Assay and calculate Assay for following two samples against standard. 5

	Area	Dilution factor	Weight (mg)	Purity	Potency of Std.
Standard	5072	10	5.002	99.91	99.85
Sample-1	3986	10	5.109	99.57	
Sample-2	2530	10	2.508	99.98	

- 2 Discuss various qualitative tests for heavy metal detection. 5
- 3 Write experimental method to perform Loss on Drying Test. 5

Q3 (A)	Answer the following questions	04 Marks
1	Write twelve principles of green chemistry.	4
Q3 (B)	Answer any two questions out of three	10 Marks
1	Discuss the concept of Atom economy with suitable example.	5
2	Explain following concepts of green chemistry in brief with example (i) Design to degrade (ii) Renewable feedstock	5
3	Discuss merits and demerits of microwave assisted reactions.	5
Q4 (A)	Answer the following questions	04 Marks
1	What is patent? What are the basic needs of invention to file a patent?	2
2	What cannot be patented?	2
Q4 (B)	Answer any two questions out of three	10 Marks
1	Briefly explain about types of intellectual property laws.	5
2	What is Trademark? Explain about types and functions of Trademarks.	5
3	Give an account of Copy rights with suitable examples.	5
Q5 (A)	Answer the following questions	04 Marks
1	Discuss introduction, classification and clinical significance of carbohydrates.	4
Q5 (B)	Answer any two questions out of three	10 Marks
1	Write a note on Acid hematin method for estimation of hemoglobin.	5
2	Explain estimation of glucose by GOD-POD method.	5
3	Explain the following terms in brief with figure (i) Adsorption (ii) Absorption	5
