Reg. No ..... Name **25P4019**

MSc DEGREE END SEMESTER EXAMINATION- MARCH 2025

SEMESTER 4 : PHARMACEUTICAL CHEMISTRY

COURSE : **21P4CPHT14EL : ADVANCES IN PHARMACEUTICAL OPERATIONS**

(For Regular - 2023 Admission and Supplementary 2022/2021 Admissions)

Duration : Three Hours Max. Weights: 30

PART A

Answer any 8 questions **Weight: 1**

1.	Give an example each for a sublingual and buccal medications?	(E, CO 2)
2.	Define New Invention	(U, CO 4)
3.	What is the significance of ECD in GC?	(R, CO 5)
4.	Give an account of solubilization of drugs by surfactants	(U, CO 2)
5.	What do you mean by caking? Why is it not favorable in pharmaceutical suspension?	(A, CO 3)
6.	What are the conditions to be satisfied for an invention to be patentable ?	(U, CO 4)
7.	What is SPET?	(R, CO 5)
8.	Explain the limit test for Mercury.	(U, CO 4)
9.	Explain the working principle and applications of ultracentrifugation.	(U, CO 5)
10.	What are any two quality control tests performed on tablets?	(A, CO 2)

(1 x 8 = 8)

PART B

Answer any 6 questions **Weights: 2**

11.	What do you mean by numbering gelatin capsules?	(U, CO 2)
12.	Explain the preparation of an o/w and w/o emulision	(U, CO 3)
13.	Describe about the patentable inventions in India	(U, CO 4)
14.	What is evaporation? Give an account of the factors affecting evaporation.	(U, CO 5)
15.	Describe how emulsifiers are classified according to their structure.	(U, CO 3)
16.	What are vaginal capsules? How do they act ?	(E, CO 2)
17.	Give an account of diagnostic radiopharmaceuticals	(An, CO 5)
18.	What are the criteria for naming an inventor in a patent ?	(U, CO 4)

(2 x 6 = 12)

PART C

Answer any 2 questions **Weights: 5**

19.	Briefly explain the principle and procedure of Gas Chromatography. Discuss the different parts of a GC. Explain the principle of working of a detector used in GC. Give the applications.	(U, CO 5)
20.	Discuss any one method in preparing tablets with its technical details	(U, CO 2)
21.	Elaborate targeted drug delivery based on various strategies. Brief about various carriers used for targeted drug delivery ?	(An, CO 1)
22.	Brief various types of stability that must be considered for a drug? What is oxidative and packing stability?	(U, CO 2)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Describe the drug delivery systems and pharmaceutical dosage forms.	U	21	5
CO 2	Explain preformulation studies and stability testing of drugs.	R	1, 4, 10, 11, 16, 20, 22	17
CO 3	Illustrate the application of colloids and chromatography in pharmaceutical chemistry.	A	5, 12, 15	5
CO 4	Describe the principles of forensic pharmacy.	R	2, 6, 8, 13, 18	7
CO 5	Explain different methods of extraction and application of radiopharmaceuticals.	R	3, 7, 9, 14, 17, 19	12

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;