

Reg. No.:



W7128

Name:

University of Kerala

Third Semester FYUGP Degree Examination, November 2025

Discipline Specific Elective

CHEMISTRY

UK3DSECHE207 - MEDICINAL & PHARMACEUTICAL CHEMISTRY - I

Academic Level: 200-299

2024 Admission

Time: 2 Hours(120 Mins)

Max. Marks: 56

Part A.6 Marks:Time 5 Minutes.(Cognitive Level :Remember(RE)/Understand(UN)) Objective Type.1 mark each,
Answer all questions

Qn No.	Question	CL	CO
1	Cite any two roles of Chemistry in Pharmacy.	RE	1
2	Name one medicinal use of <i>Ocimum tenuiflorum</i> (Thulasi) in respiratory disorders.	RE	4
3	Describe Molecular pharmacology.	UN	1
4	What is the main goal of target identification in drug discovery?	UN	2
5	What is the rule of ligand-based drug discovery in CADD?	UN	1
6	Give two instances of plant-based crude drugs and their sources.	UN	3

Part B.10 Marks.Time:20 Minutes (Cognitive Level:Understand(UN)/Apply(AP))Two-three sentences.2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Discuss the classification of drugs	UN	3
8	Discuss the importance of Chemistry in Pharmacy.	UN	1
9	Identify and evaluate the exploitation of side effects of a drug taking Minoxidil as an example.	AP	2
10	Identify the major phytochemical constituents in <i>Adhatoda vasica</i> and <i>Azadirachta indica</i> .	AP	4

Qn No.	Question	CL	CO
11	Explain the scope of pharmacognosy	AP	3

Part C.16 Marks. Time: 35 Minutes. (Cognitive Level : Apply (AP) / Analyse (AN)) Short Answer. 4 marks each, Answer all 4 questions, choosing among options * within each question

Qn No.	Question	CL	CO
12	A) Explain the organization of a pharmacopeial monograph using the Indian Pharmacopoeia as a reference. OR B) Organize the historical development of Pharmaceutical Chemistry over years.	AP	1, 1
13	A) Employ your knowledge of drug metabolism to predict the consequences of an overdose of paracetamol OR B) Modify the structure of progesterone in order to enhance its oral bioavailability.	AP	2, 2
14	A) Examine how adulteration methods can influence the choice of evaluation techniques. OR B) Analyze the various parameters involved in the quality control of crude drugs and their role in ensuring drug safety and efficacy.	AN	3, 3
15	A) Distinguish between the conjunction and disjunction methods of drug design. OR B) Correlate the advantages and limitations of structure-based and ligand-based drug discovery approaches.	AN	4, 4

Qn No.	Question	CL	CO

Part D.24 Marks. Time: 60 Minutes. (Cognitive Level :Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer 6 Marks each. Answer all 4 questions choosing among options * within each question

Qn No.	Question	CL	CO
16	A) Formulate a scheme for drug evaluation. OR B) Illustrate how pharmacognosy can be used to evaluate the quality and purity of herbal drugs.	AN	3, 3
17	A) Discuss the role of bioassay in drug discovery including its importance in determining the potency and efficacy of drugs OR B) Explain the different stages of drug discovery.	EV	2, 2
18	A) Analyse the different methods of adulteration of crude drugs. For each method, discuss how it can affect (a) the therapeutic efficacy, (b) safety and (c) detection. OR B) Evaluate the significance of computer aided drug discovery in pharmaceutical research, highlighting its benefits and drawbacks.	EV	4, 4
19	A) Propose a stepwise plan for identifying a lead compound from a natural source and outline how you would optimize it to improve selectivity and safety for clinical use. OR B)	CR	2, 2

Qn No.	Question	CL	CO
	Design a simple flowchart showing the stages of drug discovery and development (from target identification to approval). Add at least one example drug in your chart		