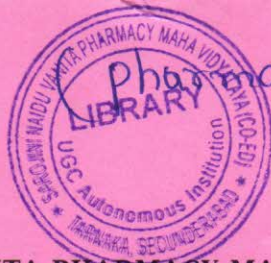


QP Code:42101/43101/45101



Hall Ticket Number

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SAROJINI NAIDU VANITA PHARMACY MAHA VIDYALAYA (Co-Ed.)(Autonomous)
M.Pharmacy (PCI) SEMESTER I (Main) Examination, APRIL-2026

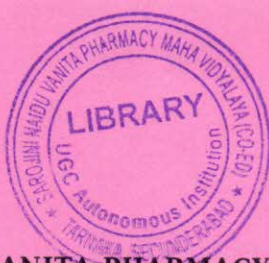
Course:Modern Pharmaceutical Analytical Techniques

Time: 3 Hours Max.

Marks: 75

Question No.	Question	CO	BL
PART-A	Answer any 5 questions.	5 × 15 = 75	
1	Explain in detail the principle and instrumentation of a double beam spectrophotometer with a neat labelled diagram.	I	2
2	Justify the role of quantum numbers in NMR spectroscopy and explain the principle and instrumentation of NMR spectrometer	II	5
3	Write the principle, theory, and instrumentation of Mass Spectrometry with suitable explanations and diagrams.	III	1
4	Classify the various chromatographic techniques and discuss the factors affecting resolution and the isolation of drugs in column chromatography with suitable explanations.	IV	2
5	Illustrate the principle, instrumentation, factors affecting separation, and applications of gel electrophoresis with suitable diagrams	V	2
6	Compare the instrumentation and applications of Differential Thermal Analysis (DTA) and Thermogravimetric Analysis (TGA).	VI	4
7	Organize the information on quenchers, instrumentation, and applications of a fluorescence spectrophotometer, highlighting their principles and significance in analysis	I	3
8	Explain High Performance Liquid Chromatography (HPLC), with neat and well-labeled diagrams, explaining their principles and working mechanisms	IV	2

QP Code:45102



Hall Ticket Number

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SAROJINI NAIDU VANITA PHARMACY MAHA VIDYALAYA (Co-Ed.) (Autonomous)
M.Pharmacy (PCI) SEMESTER I (Main) Examination, APRIL-2026

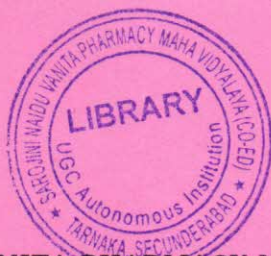
Course: Advanced Pharmacology-I

Time: 3 Hours Max.

Marks: 75

Question No.	Question	CO	BL
PART-A	Answer any 5 questions.	5 × 15 = 75	
1	Illustrate various mechanisms and Principles of drug actions with examples.	I	2
2	List various types of drug absorption mechanisms and explain the factors affecting drug absorption.	I	2
3	Explain in detail the neurohumoral transmission of serotonin with the help of well labelled diagram.	II	5
4	Classify Parasympathomimetics and discuss the physiological actions, indication and adverse effects of acetylcholine.	II	4
5	Classify narcotic analgesics, and explain in detail the mechanisms of action, adverse effects, and therapeutic uses of Morphine.	III	4
6	Classify antidepressant drugs and explain in detail the mechanism of action, indications, and adverse effects of SSRTI.	III	4
7	Define and classify diuretics. explain in detail the mechanism of action, Indications and Adverse effects of Loop diuretics.	IV	4
8	Analyze the physiological and pathological roles of prostaglandin with a note on its receptors.	V	4

QP Code:45103



Hall Ticket Number

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SAROJINI NAIDU VANITA PHARMACY MAHA VIDYALAYA (Co-Ed.) (Autonomous)
M.Pharmacy (PCI) SEMESTER I (Main) Examination, APRIL-2026

Course: Pharmacological and Toxicological Screening Methods-I

Time: 3 Hours Max.

Marks: 75

Question No.	Question	CO	BL
PART-A	Answer any 5 questions.	5 × 15 = 75	
1	Explain about handling procedures for guinea pig and its research applications?	I	2
2	Explain about alternative animal models	II	4
3	Explain screening methods of analgesics?	III	1
4	Elaborate preclinical screening methods for anti-diabetics?	IV	1
5	Discuss about ELISA?	V	5
6	Evaluate pharmacological importance of bioassays and its limitations?	I	5
7	What is Preclinical screening and Explain different types of screening	II	1
8	Explain preclinical invivo screening methods for antihypertensive agents.	IV	4

QP Code:45104



Hall Ticket Number

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SAROJINI NAIDU VANITA PHARMACY MAHA VIDYALAYA (Co-Ed.) (Autonomous)
M.Pharmacy (PCI) SEMESTER I (Main) Examination, APRIL-2026

Course: Cellular and Molecular Pharmacology

Time: 3 Hours Max.

Marks: 75

Question No.	Question	CO	BL
PART-A	Answer any 5 questions.	5 × 15 = 75	
1	Explain the structure and functions of the cell membrane with suitable diagrams. 8 Marks Describe the structure and functions of cellular organelles such as mitochondria, endoplasmic reticulum, and Golgi apparatus. 7 Marks	<i>I</i>	<i>1</i>
2	Explain the importance of small interfering RNA (siRNA) in gene regulation and Discuss the biological role of microRNA in post-transcriptional gene regulation.	<i>I</i>	<i>2</i>
3	Describe the molecular structure and mechanism of ligand-gated ion channel receptors.	<i>II</i>	<i>2</i>
4	Explain the MAPK signalling pathway and its components. Discuss the role of MAPK signalling in cell proliferation and disease.	<i>II</i>	<i>2</i>
5	Discuss Gene therapy in detail and explain the recent advances and clinical applications of gene therapy.	<i>III</i>	<i>4</i>
6	Explain the principle and steps involved in Polymerase Chain Reaction (PCR). Differentiate reverse transcription PCR and real-time PCR.	<i>III</i>	<i>2</i>
7	Explain genetic variations and their role in health and disease.	<i>IV</i>	<i>2</i>
8	Explain the methods of cryopreservation of cell cultures. Discuss the importance of cell characterization.	<i>V</i>	<i>2</i>
