QP Code:42101/43101/45101

Hall Ticket Number

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:41102

Hall Ticket Number

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

Course:Drug Delivery System

Time: 3 Hours Max. Marks: 75

Question No.	Question	CO	BL
PART-A	**Answer any 5 questions.**	**5 × 15 = 75**	
1	Explain indetail about Sustained Release (SR) and Controlled Release (CR) formulations with advantages and disadvantages.	*I*	*2*
2	Explain physicochemical factors for Sustained Release (SR) and Controlled Release (CR) formulations	*I*	*2*
3	Explain Feedback-Regulated Drug Delivery Systems (DDS): Principles, Fundamentals & Applications	*II*	*2*
4	Define gastro-retentive drug delivery systems (GRDDS). Explain their principles, concepts, advantages & disadvantages.	*III*	*1*
5	Discuss indetails about formulation approaches, formulation and evaluation tests of in situ gels for ocular drug delivery systems. Justify their advantages over conventional dosage forms.	*IV*	*5*
6	Discuss about concepts, formulation methods, evaluation parameters, and recent advances in transdermal patches.	*V*	*5*
7	Discuss the barriers associated with protein and peptide drug delivery and their impact on drug absorption.	*VI*	*5*
8	Define transdermal delivery of vaccines. Enumerate different approaches used along with their advantages, applications and limitations.	*VII*	*1*

***

QP Code:41103

Hall Ticket Number

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

Course:Modern Pharmaceutics

Time: 3 Hours Max. Marks: 75

Question No.	Question	CO	BL
PART-A	**Answer any 5 questions.**	**5 × 15 = 75**	
1	1. Discuss about Drug Excipient Compatability studies for Solid dosage forms?	*I*	*2*
2	Describe URS, DQ, IQ, OQ and PQ of equipment & facilities and mention their importance.	*II*	*5*
3	Write about cGMP requirements for layouts of buildings and equipments?	*III*	*6*
4	Explain the role of Heckel plots in compaction of tablets	*IV*	*4*
5	Discuss students t-test and Chi square test and its applications.	*V*	*5*
6	Discuss about optimization in experimental design for Pharmaceutical Products?	*I*	*4*
7	Explain the phases of compaction profile with a suitable example?	*IV*	*4*
8	Write in detail about dissolution parameters and diffusion parameters	*V*	*2*

***

QP Code:41104

Hall Ticket Number

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

Course:Regulatory Affairs

Time: 3 Hours Max. Marks: 75

Question No.	Question	CO	BL
PART-A	**Answer any 5 questions.**	**5 × 15 = 75**	
1	What are the differences between CTD and eCTD formats. Describe the contents of each CTD module. 15 M	*I*	*2*
2	**Discuss Hatch-Waxman Act 1984, impact Generic Drug Approval and discuss in detail about Para IV filing- 15 Marks**	*II*	*6*
3	**Explain Significance & role of Clinical Research Phases in drug delopment process-15 Marks**	*III*	*2*
4	**Describe in detail the regulatory requirements governing approval of medical devices in major markets-15 Marks**	*IV*	*2*
5	A. Describe the contents and purpose of the Investigator's Brochure in clinical trials.- 5 Marks B. Write a detailed note on the Mutual Recognition Procedure in European regulations. 10 Marks	*V*	*2*
6	**Explain the contents of IND and describe the IND approval process with regulatory requirements-15 Marks**	*V*	*4*
7	**Discuss the role and responsibilities of sponsors in the quality assurance and management of clinical trials. -15 Marks**	*VI*	*6*
8	**Elaborate elements and steps involved in informed consent process as per ICH GCP.-15 Marks**	*VI*	*6*

***