Code No: G-13107/PCI

# FACULTY OF PHARMACY

**B. Pharmacy (PCI) VII - Semester (Main & Backlog) Examination, March 2025**

**Subject: Industrial Pharmacy - II**

**Time: 3 Hours** **Max.Marks:75**

## PART - A

**Note: Answer all the questions.** **(10 x 2 = 20 Marks)**

1. What is scale up?
2. Write a note on documentation in pilot plant.
3. What is technology transfer?
4. Write a note on legal issues in technology transfer.
5. What is qualification and validation?
6. Write a note on Investigator's Brochure (IB).
7. What is quality assurance?
8. Why informed consent procedure is important in clinical trials?
9. Write the role of ISO in quality management.
10. Write a note on state licensing authority responsibilities.

## PART - B

**Note: Answer any two questions.** **(2 x 10 = 20 Marks)**

11. What is pilot plant? Write the general considerations for pilot plant and scale up for Tablets and Liquid dosage forms.
12. Write a note on the (i) IND and NDA application (ii) Clinical research protocol.
13. (a) Write a note on Indian drug regulatory. Write CDSCO functions.
    (b) Explain about Central Drugs Laboratory and its function.

## PART - C

**Note: Answer any seven questions.** **(7 x 5 = 35 Marks)**

14. Write the SUPAC guidelines for solid and liquid dosage forms.
15. Write a note on documentation in pilot plant and scaleup.
16. Write general principles of technology transfer.
17. Write the role and responsibility of regulatory affairs professionals.
18. Write a note on APCTD, NRDC, TIFAC technology transfer agencies in India.
19. Write the Principles and applications of QBD.
20. Write a note on TQM.
21. Write a note on NABL and GLP.
22. Write a note on regulatory requirements and approval procedures for new drugs.

*********

256221881012

Code No. G-13106/PCI

# FACULTY OF PHARMACY

**B. Pharmacy VII - Semester (PCI) (Main & Backlog) Examination, March 2025**
**Subject: Instrumental Methods of Analysis**

**Time: 3 Hours** **Max. Marks: 75**

## PART – A

**Note: Answer all the questions.** **(10 x 2 = 20 Marks)**

1. State and explain Beer-Lambert equation.
2. What are the different types of fundamental modes of vibration in molecules after absorption of IR radiations?
3. Define fluorescence and Phosphorescence phenomena.
4. Write the principles of Flame photometry technique.
5. Define the term Retention time and Resolution in HPLC?
6. Write the principles of partition and adsorption chromatography.
7. Write the applications of gel permeation chromatography.
8. What are the different types of Ion exchange resins used in Ion-exchange chromatography?
9. Write the principles of separation in Electrophoresis.
10. Write about the different types of columns used in GC.

## PART – B

**Note: Answer any two questions.** **(2 x 10 = 20 Marks)**

11. Describe different components of UV spectrophotometer with a neat labelled diagram.
12. Explain the principles and experimental details of paper chromatography for Quantitative analysis.
13. a) Describe the different sampling preparation techniques in IR spectroscopy.
    b) Describe different types of detectors used in HPLC instruments.

## PART – C

**Note: Answer any seven questions.** **(7 x 5 = 35 Marks)**

14. Discuss the different factors influencing intensity of fluorescence of molecules.
15. Explain the theoretical principles and applications of affinity chromatography.
16. Explain in brief about Paper electrophoresis technique.
17. Describe different methods for quantitative analysis of single component samples by UV spectrophotometry.
18. Explain the principle and measurement of Interferences in Atomic Absorption spectroscopy.
19. Explain the principles, advantages and disadvantages, and applications of thin layer chromatography.
20. Write about the Spectrophotometric titrations with examples?
21. Explain the different derivatization techniques used in Gas Chromatography?
22. Explain the instrumentation of Nephelotubiodmetry.

* * *

Code No. G-13109/PCI

# FACULTY OF PHARMACY

**B. Pharmacy (PCI) VII - Semester (Main & Backlog) Examination, March 2025**
**Subject: Novel Drug Delivery Systems**

**Time: 3 Hours** **Max. Marks: 75**

## PART – A

**Note: Answer all the questions.** **(10 x 2 = 20 Marks)**

1. Define the following terms?
   a) Controlled drug delivery system
   b) Sustained drug delivery system
2. Distinguish between matrix and reservoir systems?
3. List out the methods used for liposomes?
4. Define the following
   a) Osmotic drug delivery system b) Transdermal drug delivery system
5. Classify gastro retentive drug delivery systems?
6. Define the following?
   a) Implants b) Niosomes
7. Differentiate between Zero Order and First Order release kinetics?
8. List out the different types of nanoparticles?
9. Applications of monoclonal antibodies?
10. Discuss the advantages of Ocusert?

## PART – B

**Note: Answer any two questions.** **(2 x 10 = 20 Marks)**

11. Discuss the formulation and evaluation of floating drug delivery systems?
12. Write in detail about the coacervation phase separation technique?
13. Write in detail about the following?
    a) Explain about the push pull systems?
    b) Mucoadhesive drug delivery system?

## PART – C

**Note: Answer any seven questions.** **(7 x 5 = 35 Marks)**

14. Discuss about the factors influencing formulation of sustained release system?
15. Write the polymerization techniques?
16. Explain the Wuster process for microencapsulation with an example?
17. Explain the different theories of mucoadhesion?
18. Describe the formulation of Buccal drug delivery systems?
19. Discuss about the metered dose inhalers?
20. Write about ocular controlled drug delivery systems? Describe the methods to overcome the ocular barriers?
21. Write about the applications Intrauterine devices?
22. Write about the elementary osmotic pump?

* * *

Code No: G-13108/PCI

# FACULTY OF PHARMACY

**B. Pharmacy VII Semester (PCI) (Main & Backlog) Examination, March 2025**
**Subject: Pharmacy Practice**

**Time: 3 Hours** **Max. Marks: 75**

## PART – A

**Note: Answer all the questions.** **(10 x 2 = 20 Marks)**

1. Classify Hospitals based on the system of medicine and speciality.
2. What is Idiosyncrasy? Give examples.
3. Define rational use of medicines.
4. Enlist the types of drug distribution systems.
5. Mention the different sources of drug information.
6. What do you mean by automatic stop orders?
7. Define Clinical Pharmacy. Mention its objectives.
8. Explain the significance of OTC drugs.
9. Define inventory. Mention the objectives of inventory control.
10. Define and classify ADR.

## PART – B

**Note: Answer any two questions.** **(2 x 10 = 20 Marks)**

11. Define Medication Adherence. Mention the methods to measure it. What is the role of a Pharmacist in promoting medication adherence in patients.
12. a) Explain in detail the objectives of Pharmacy and Therapeutic Committee (PTC).
    b) Discuss the role of PTC in adverse drug monitoring.
13. Define Therapeutic Drug Monitoring (TDM). Mention its objectives and explain the process involved in TDM.

## PART – C

**Note: Answer any seven questions.** **(7 x 5 = 35 Marks)**

14. Define hospital and explain its organization.
15. Describe the various systems involved in the dispensing of drugs to inpatients.
16. Define hospital formulary and explain its need.
17. Describe the various systems involved in the dispensing of drugs to inpatients.
18. Explain why communication skill is important for a pharmacist.
19. Discuss the role of Pharmacist in the education and training program in the hospital.
20. Discuss the role of Pharmacist in the interdepartmental communication and community health education.
21. Explain hospital budget preparation and implementation.
22. Mention the various laboratory blood tests. Explain their significance.

* * *