Code No. 12224/PCI

FACULTY OF PHARMACY

B. Pharmacy VII-Semester (PCI) (Main) Examination, March 2021

Subject: Instrumental Methods of Analysis

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any seven questions. **(7 X 3 = 21 Marks)**

1. Define chromophore and Auxochrome and give examples.
2. Explain the phenomenon of Fluorescence and Phosphorescence.
3. What are the different types of fundamental modes of vibration in molecules after absorption of IR radiations?
4. Write the principles of partition and adsorption chromatography.
5. Write the different fuel gases and oxidants used in flame photometry technique.
6. Write the applications of gel permeation chromatography.
7. Write the ion exchange mechanism of ion exchange chromatogramphy.
8. Define retardation factor.
9. What is Bathochromic and Hypsochromic shift?
10. Write the principle involved in affinity chromatography.

PART – B

Note: Answer any one questions. **(1 X 14 = 14 Marks)**

11. Describe different components of UV spectrophotometer with a labeled diagram.
12. Explain the principles and experimental detail of thin layer chromatography for Quantitative analysis.
13. Explain the principles and instrumentation of HPLC technique.

PART – C

Note: Answer any five questions. **(5 X 8 = 40 Marks)**

14. Discuss the factors influencing intensity of fluorescence and applications of Fluorimetry technique.
15. Explain about gel electrophoresis.
16. Explain different sample handling techniques used in IR spectroscopy.
17. Write the theory and principle involved in flame photometry technique.
18. Write short notes on nepheloturbidometry.
19. Describe the different types of detectors used in Gas Chromatography.
20. Explain the different techniques used in paper chromatography.
21. Write the principles and applications of Atomic absorption spectroscopy.
22. Write the different factors affecting electrophoretic mobility of ions in electrophoresis separations.

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Code No.12227/PCI

FACULTY OF PHARMACY

B. Pharmacy VII-Semester (PCI) (Main) Examination, March 2021

Subject: Novel Drug Delivery Systems

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any seven questions. **(7 X 3 = 21 Marks)**

1. Write the advantages and disadvantages of controlled release dosage forms.
2. Explain various pharmacokinetic properties for selection of drug for controlled drug delivery system.
3. What are niosomes, write its structural components.
4. What are transdermal drug delivery system. Write its applications.
5. Write the advantages and disadvantages of mucoadhesive drug delivery system.
6. Define microspheres and microcapsules.
7. Write note on permeation enhancers with examples.
8. What is floating time and floating lag time.
9. Write the applications of targeted drug delivery system.
10. Write about classification of liposomes.

PART – B

Note: Answer any one question. **(1 X 14 = 14 Marks)**

11. Explain the approaches used in development of gastro retentive drug delivery systems.
12. Explain in detail coacervation phase separation with suitable examples.
13. Discuss classification, properties and applications of polymers used in controlled drug delivery system.

PART – C

Note: Answer any five questions. **(5 X 8 = 40 Marks)**

14. Discuss the physicochemical factors affecting controlled drug delivery system.
15. Explain the principles of mucoadhesion.
16. Write a note on metered dose inhaler.
17. Discuss the basis used in development of transdermal drug delivery system.
18. Explain about intra-uterine devices.
19. Write about production of monoclonal antibodies.
20. Discuss the ocular barriers, methods to overcome barriers.
21. Explain the approaches used in development of controlled drug delivery systems.
22. Explain the formulation considerations of buccal drug delivery system.

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Code No. 12226/PCI

FACULTY OF PHARMACY

B. Pharmacy VII-Semester (PCI) (Main) Examination, March 2021

Subject: Pharmacy Practice

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any seven questions. **(7 X 3 = 21 Marks)**

1. Describe the role of clinical pharmacist in health care setting?
2. Enumerate the types of drug related problems.
3. Mention the requisite Objectives for management of materials in hospital pharmacy.
4. Indicate the advantages and disadvantages of Unit Dose Distribution System.
5. Provide four examples of TDM drugs with their therapeutic range.
6. Give a brief note on Factors which influence drug variability?
7. Write a short note on the Material requirement for community pharmacy.
8. Define ADR and classify.
9. Explain types of drug interactions with example.
10. Write a note on rational use of drugs.

PART – B

Note: Answer any one question. **(1 X 14 = 14 Marks)**

11. Define hospital formulary and elaborate the stepwise procedure involved in the preparation of hospital formulary.
12. What is clinical pharmacy? Elucidate functions and responsibility of clinical pharmacy.
13. Give a detailed account on the factors affecting Therapeutic Drug Monitoring.

PART – C

Note: Answer any five questions. **(5 X 8 = 40 Marks)**

14. Explain the roles and responsibility of hospital pharmacist.
15. Write down the legal requirements for establishment and maintenance of drug store.
16. Enumerate the organization and functions of hospital.
17. Explain in detail about the role of pharmacist in medication adherence.
18. Define Pharmacy and Therapeutic Committee & explain the objectives, organization and functions.
19. Give comprehensive note on the steps involved in patient counseling.
20. Define Inventory Control. Specify the methods involved in Inventory Control.
21. Describe the procurement or purchasing procedure for pharmacists in detail.
22. Explain the various hematologic tests and their significance.

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Code No. 12225/PCI

FACULTY OF PHARMACY

B. Pharmacy VII-Semester (PCI) (Main) Examination, March 2021

Subject: Industrial Pharmacy - II

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any seven questions. **(7 X 3 = 21 Marks)**

1. What is platform technology?
2. Define: (a) Pilot Plant (b) Scale-up.
3. 'Technology transfer means physical transfer of goods'. True or false, explain.
4. Write the roles of regulatory affairs department.
5. Explain the term "Technology transfer".
6. Differentiate between IND and NDA.
7. Write the applications of Quality by Design.
8. What is OOS? How does OOS apply only to finished products?
9. Enlist functions of regulatory authorities.
10. Write the vision and mission of CDSCO.

PART – B

Note: Answer any one question. **(1 X 14 = 14 Marks)**

11. Explain the process of Change control with the help of flow-chart.
12. Discuss the NDA approval process in detail, illustrate with the help of flow diagram.
13. Explain the features of finished product technology transfer as per WHO guidelines.

PART – C

Note: Answer any five questions. **(5 X 8 = 40 Marks)**

14. Discuss the stages of pharmaceutical product life-cycle.
15. Explain the principles of Good Laboratory Practice (GLP).
16. Describe in detail the barriers to technology transfer.
17. What is Investigator's Brochure (IB)? Comment on the content of IB.
18. Discuss the objectives of pilot plant.
19. Explain SUPAC guidelines.
20. Write about ISO 9000 series.
21. Describe the phases of clinical trials.
22. Enlist the key elements of TQM and explain any one of them.

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