Code No: F-7191/PCI

FACULTY OF PHARMACY

B. Pharmacy VII - Semester (PCI) (Main & Backlog) Examination, March 2024
Subject: Instrumental Methods of Analysis

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

PART - A

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

1. Explain bathochromic shift and Hypsochromic shift with examples.
2. What are chromophores and auxochromes. Give examples.
3. Write the principles of absorption in IR spectroscopy.
4. Write the principles of partition and adsorption chromatography.
5. Write the different fuel gases and oxidants used in the flame photometry technique.
6. Write the different types of stationary phases used in gel permeation chromatography separations.
7. Write the ion exchange mechanism in ion exchange chromatography.
8. Define the Capacity factor.
9. Write the effect of solvent on the absorption maximum of compounds.
10. Write the applications of affinity chromatography.

PART - B

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

11. Describe different components of IR spectrophotometer with a neat labelled diagram.
12. Explain the principles and experimental details of Paper chromatography.
13. Explain the principles and instrumentation of the HPLC technique.

PART - C

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

14. Describe the Jablonski diagram and explain different internal and external processes in fluorescence emission.
15. Explain the factors affecting Ion exchange Chromatography and applications of the technique.
16. Explain different sample handling techniques used in IR spectroscopy.
17. Write the Instrumentation and applications of the flame photometry technique.
18. Write short notes on nepheloturbidometry.
19. Describe the different types of detectors used in UV spectrophotometers.
20. Explain the different development techniques used in paper chromatography.
21. Write the principles and applications of Atomic absorption spectroscopy.
22. Discuss the theory and principles of separation in capillary electrophoresis.

Code No: F-7194/PCI

FACULTY OF PHARMACY

B. Pharmacy VII - Semester (PCI) (Main & Backlog) Examination, March 2024

Subject: Novel drug delivery systems

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

PART - A

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

1. Differentiate between matrix and reservoir system.
2. Define polymers. Classify them with examples.
3. Define microencapsulation. Write its applications.
4. Write the advantages and disadvantages of mucoadhesive drug delivery system.
5. Define microspheres and microcapsules.
6. Write note on permeation enhancers used in Transdermal drug delivery system with examples.
7. What is floating time and floating lag time.
8. Write the applications of targeted drug delivery system.
9. Explain the basic structural components of liposomes.
10. Explain about intra ocular barriers.

PART - B

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

11. Explain the approaches used in development of gastro retentive drug delivery systems.
12. Explain in detail any two methods of microencapsulation.
13. Explain the basic components and formulation approaches used in transdermal drug delivery system.

PART - C

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

14. Discuss the physicochemical factors affecting controlled drug delivery system.
15. Explain the principles of mucoadhesion.
16. Write a note on nebulizers.
17. Discuss about intra uterine devices.
18. Explain about preparation methods of liposomes.
19. Write about production of monoclonal antibodies.
20. Explain about ocular inserts.
21. Explain about osmotic pump.
22. Explain about the inflatable and gastroadhesive systems.

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Code No: F-7193/PCI

FACULTY OF PHARMACY

B. Pharmacy VII - Semester (PCI) (Main & Backlog) Examination, March 2024

Subject: Pharmacy Practice

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

PART - A

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

1. Define Hospital.
2. Define Hospital Pharmacy.
3. Define ADR.
4. Define controlled drugs.
5. Define Hospital formulary.
6. Mention few drugs which require TDM.
7. What do you mean by automatic stop order?
8. Define OTC drugs.
9. What do you mean by investigational new drug?
10. What is the significance of ESR?

PART - B

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

11. Define clinical pharmacy, explain the functions and responsibilities of clinical pharmacist.
12. Define inventory control? Explain in detail any one method of inventory control technique used in the procurement of drugs
13. Explain in detail therapeutic drug monitoring.

PART - C

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

14. Explain functions of hospital pharmacy.
15. Describe different types of adverse drug reactions.
16. What are the legal requirement for establishing a community pharmacy?
17. Explain in detail procedure for dispensing of controlled drugs.
18. What do you mean by rational use of drugs? How the concept of Rational use can be implemented for OTC drugs
19. Explain salient features of hospital budget preparation.
20. Explain in detail various drug purchasing procedure in a hospital pharmacy
21. Explain in detail any four blood tests and their significance.
22. What do you mean by adherence? What are the methods to improve the patient adherence towards chronic therapy.

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Code No: F-7192/PCI

FACULTY OF PHARMACY

B. Pharmacy VII - Semester (PCI) (Main & Backlog) Examination, March 2024

Subject: Industrial Pharmacy

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

PART - A

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

1. Write a note on SUPAC guidelines.
2. What is pilot plant and scale-up?
3. Explain the importance of validation.
4. What is Technology transfer?
5. Write the role of regulatory affairs.
6. Mention five important data documents for ANDA.
7. Write a note on different stages of clinical trials.
8. What is informed consent?
9. Write a note on ISO 9000.
10. Write the role of CDL.

PART - B

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

11. Write about pilot plant and scale up requirements for Tablets and Capsules.

12. (a) What is technology transfer? Write general principles of Technology Transfer.
    (b) Write the role and responsibility of regulatory affairs professionals.

13. (a) Explain the principles of QBD and applications of QbD.
    (b) Write a note on NABL and GLP.

PART - C

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

14. Write a note on pilot plant scale-up for liquid dosage forms.
15. Write a note on Technology Transfer procedure from R&D to production (Process, packaging and cleaning).
16. Write briefly on Investigational New Drug (IND) Application.
17. Write the role of biostatistics in pharmaceutical product development
18. What is QRM? Describe the principle and process of QRM.
19. Write a note on six sigma concept.
20. Write briefly on TQM.
21. Write a note on Indian Regulatory. Write CDSCO functions.
22. Write a note on COPP.

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