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Total Number of Pages : 02

Course: B.PHARM.

Sub\_Code: BP701T

7<sup>th</sup> Semester Examinations 2022-23  
SUBJECT: Instrumental Methods of Analysis  
BRANCH(S): Pharmacy

Time : 3 Hour

Max Marks : 75

Q.Code : L004

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

(2 x 10)

Q1

Answer the following questions:

- Discuss the importance of finger print and functional group region in IR spectroscopy.
- Discuss the possible types electronic transitions exhibited by methanol.
- Define Chromophores and Auxochromes with suitable examples.
- Name the elements that can be analyzed by Flame Photometry.
- Name the different types of fundamental modes of vibration in IR spectroscopy.
- Define molar extinction coefficient.
- What are differences between normal and reverse phase chromatography?
- What is Fermi resonance?
- Define R<sub>f</sub> value? Give its importance in analysis of samples.
- Define retention time (t<sub>R</sub>).

Part-II

Q2

Focused-Short Answer Type Questions- (Answer Any Seven)

(5 x 7)

- Discuss the principle of Fluorimetry and factors influencing Fluorescence intensity in Fluorimetry.
- Discuss the principle and applications of Gel chromatography.
- Describe briefly Van Deemter equation and plots.



- d) Discuss the detectors used in Gas Chromatography.
- e) What is Affinity chromatography? Describe the theory and applications of Affinity chromatography.
- f) Derive Beer and Lambert's Law. What are the deviations observed from Beer Lambert's law?
- g) Explain the principle of Atomic Absorption spectroscopy.
- h) Discuss the different types of detectors used in HPLC.
- i) Describe the procedure for the preparation of column for column chromatography.

### Part-III

#### Long Answer Type Questions (Answer Any Two)

- Q3 Describe the principle, instrumentation and application of UV-Vis spectroscopy. (10)
- Q4 Describe the principle and different types of paper chromatography. Discuss the common developing reagents used for detection of components in paper chromatography. (10)
- Q5 Describe principle and applications of IR spectroscopy. Discuss in detail detectors used in IR spectrometer. (10)
- Q6 Describe the principle, Instrumentation and applications of Gas Chromatography. Discuss briefly the requirements of derivatization of samples in gas chromatography. (10)

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Total Number of Pages : 02

Course: B.Pharm  
Sub Code: BP704T

7<sup>th</sup> Semester Regular/Back Examination: 2022-23

SUBJECT : Novel Drug Delivery System

BRANCH(S): B.Pharma

Time : 3 Hour

Max Marks : 75

Q.Code : L041

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

(2 x 10)

Q1

Answer the following questions :

- What is osmotic pump drug delivery?
- Define microspheres.
- Differentiate between dry powder and metered dose Inhalers.
- Mention the limitations of buccal drug delivery.
- What are the characteristics of drug suitable for transdermal drug delivery?
- Differentiate between liposome and noisome.
- Write various factors affecting skin permeation.
- Define ocuserts.
- Write the application of monoclonal antibodies in drug delivery.
- Mention the various basic components of TDDS.

Part-II

(5 x 7)

Q2

Focused-Short Answer Type Questions- (Answer Any Seven)

- Microencapsulation.
- Gastroretentive drug delivery systems.
- Principles of mucoadhesion.
- Controlled release formulations based on diffusion.
- Intra uterine devices.
- Liposome.
- Ion exchange principles for drug release.
- Intra ocular barriers.
- Implants.



**Part-III**

**Long Answer Type Questions (Answer Any Two)**

- Q3 What is polymer, classify it, write in detail polymer application in pharmaceutical formulations. (10)
- Q4 Define nanoparticles; write in detail about its method of preparations. (10)
- Q5 Discuss in detail about various factors influenced the controlled release preparations. (10)
- Q6 Write about transdermal drug delivery, discuss various approaches of it. (10)



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Total Number of Pages : 02

Course : B.Pharm  
Sub Code : BP702T

7<sup>th</sup> Semester Reg/Back Examination: 2022-23

SUBJECT : Industrial Pharmacy II

BRANCH(S): B.Pharm

Time : 3 Hour

Max Marks : 75

Q.Code : L011

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

**Part-I**

(2 x 10)

Answer the following questions :

- What is platform technology?
- Mention the importance of Total Quality Management.
- Define ISO 9000 series of quality systems.
- Why GLP is needed?
- Write the 3 main aspects of master manufacturing procedure.
- Mention critical process parameters in the scale-up study of product stability.
- What are SUPAC guidelines?
- Write the use of Quality by Design (QbD).
- Define regulatory affairs.
- What is quality risk management?

**Part-II**

(5 × 7)

Q2 Focused-Short Answer Type Questions- (Answer Any Seven)

- Role and responsibilities of Regulatory affairs department.
- What is TQM? Briefly write principles and applications of it.
- What is six-sigma? Write the benefits of six sigma.
- What is the process of NABL accreditation?
- Outline the function of various technology transfer agencies in India.
- Enumerate the scale-up technique requirements of semi-solid dosage form.
- Explain certificate of pharmaceutical product.
- Highlights the general requirements for filing an NDA.
- Explain factors considered in scale-up process of wet granulation.



**Part-III**

**Long Answer Type Questions (Answer Any Two)**

- Q3 What is scale up process? What are the objectives and significance of plant scale up techniques? (10)
- Q4 What are the different types of drug applications that can be submitted to FDA? Briefly discuss the general requirements for use of an investigational new drug in a clinical investigation. (10)
- Q5 What are the benefits of GMP? Highlights 5 main components of good manufacturing practice? (10)
- Q6 Briefly discuss the organization, role and responsibilities of CDSCO. (10)

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Course: B.Pharm  
Sub Code: BP703T

Total Number of Pages: 02

7<sup>th</sup> Semester Reg/Back Examination: 2022-23  
SUBJECT: PHARMACY PRACTICE (Theory)  
BRANCH(S): PHARMACY

Time: 3 Hour  
Max Marks: 75  
Q.Code : L022

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II and any two from Part-III.

The figures in the right-hand margin indicate marks.

Part-I

(2 x 10)

Q1

Answer the following questions:

- Define Idiosyncrasy.
- What is economic order quantity?
- Write different storage conditions for drugs.
- What are over the counter medications?
- Composition of PTC.
- What is Drug dependence?
- What is Drug addiction?
- Types of Out-patient Drug Distribution Systems.
- What is the Need for the patient medication history interview?
- What is the Code of ethics for community pharmacy?

Part-II

(5 x 7)

Q2

Focused-Short Answer Type Questions- (Answer Any Seven)

- Give briefly the Drug allergy & intolerance.
- Write about Objective & function of Hospital Pharmacy.
- Write the Purchase procedures of Hospital.
- Write details about Hospital Formulary.
- How to Control Inventory in Hospital?
- What are the various Sources of drug information?
- Define patient counseling and describe steps involved in patient counseling.
- What are the Roles and Responsibilities of PTC?
- How to prepare and implement Budget in Hospital?



**Part-III**

**Long Answer Type Questions (Answer Any Two)**

- Q3 Describe Therapeutic Drug Monitoring.
- Q4 Define and Classify Adverse Drug Reaction with suitable examples.
- Q5 Write about different In-Patient Drug Distribution Methods.
- Q6 Define and Classify hospital. Describe the Organization Structure of a Hospital and their functions.

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