Registration No.: | | | | | | | | | | |

Total Number of Pages: 02 **Course: B.Pharm**
Sub_Code: BP701T

7th Semester Regular/Back Examination: 2024-25
SUBJECT: Instrumental Methods of Analysis
BRANCH(S): B.Pharma
Time: 3 Hours
Max Marks: 75
Q.Code: R616

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1 **Answer the following questions :** **(2 x 10)**

a) What are chromophores and auxochromes?
b) Define Fluorescence and Phosphorescence.
c) Differentiate between normal phase & reverse phase chromatography.
d) What are the different electronic transitions that occur due to the absorption of UV radiation?
e) What is finger print region? Give its significance.
f) What is the difference between isocratic and gradient elution in chromatography?
g) What is the principle involved affinity chromatography?
h) What is molar extinction co-efficient?
i) Write the principle of ion exchange chromatography.
j) Name two detecting reagents used in thin layer and paper chromatography.

Part-II

Q2 **Focused-Short Answer Type Questions- (Answer Any Seven)** **(5 x 7)**

a) Write the statement and derive the equation for Beer's – Lambert's law.
b) Explain the instrumentation and working of flame emission spectrometry.
c) What are Nephelometry and turbidometry? Write principle involved for the same.
d) Discuss the instrumentation and application of HPLC.
e) Discuss briefly rate and plate theory.
f) Explain the principle and theory of gel chromatography.
g) Describe the principle, working, and instrumentation of Atomic Absorption Spectroscopy.
h) What is Quenching? Enumerate the various factors which influence quenching effect.
i) Define electrophoresis and explain the various factors affecting electrophoresis.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3	Describe the principle, instrumentation, and applications of UV-Visible Spectrophotometer.	**(10)**
Q4	Write a note on theory and applications of IR spectrophotometry. Explain different sampling techniques employed in IR spectroscopy.	**(10)**
Q5	Describe in brief the principle, instrumentation, and applications of gas chromatography.	**(10)**
Q6	Describe principle and different techniques of paper electrophoresis. Add a note on applications of paper electrophoresis.	**(10)**

Registration No.: | | | | | | | | | | |

Total Number of Pages: 02 **Course: B.Pharm**
Sub_Code: BP702T

7th Semester Regular/Back Examination: 2024-25
SUBJECT: Industrial Pharmacy II
BRANCH(S): B.Pharm
Time: 3 Hours
Max Marks: 75
Q.Code: R619

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

Q1 Answer the following questions : (2 x 10)

a) Write the role of CDL.
b) Mention important data documents for ANDA.
c) What is Quality risk management?
d) What are the components of non-clinical drug development?
e) Mention the importance of NABL accreditation.
f) Differentiate between GMP and cGMP.
g) Mention various TT agencies in India.
h) Write the use of Quality by Design (QbD).
i) Mention the objectives of plant scale up techniques.
j) Differentiate between qualification and validation.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

a) Write a note on platform technology and mention the needs of regulatory affairs.
b) Discuss the various aspects of TQM
c) Give a brief account on SUPAC guidelines.
d) What are the quality management systems, discuss.
e) Discuss all the responsibilities of state licensing authority.
f) Write the importance of Six Sigma concept in detail.
g) Explain certificate of pharmaceutical product.
h) Write a short note on COPP.
i) Explain factors considered in scale-up process of dry granulation.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3	Explain in detail about central drug standard control organization (CDSCO).	**(10)**
Q4	What are the clinical research protocols? Briefly discuss on clinical research and BE studies.	**(10)**
Q5	What are the different types of drug applications that can be submitted to FDA? Discuss in detail about ISO 9000 series of quality systems standards.	**(10)**
Q6	What is scale up process? Explain in detail about pilot plant scale up considerations for solids.	**(10)**

Registration No.: | | | | | | | | | | |

Total Number of Pages: 01

Course: B.Pharm
Sub_Code: BP703T

7th Semester Regular/Back Examination: 2024-25
SUBJECT: Pharmacy Practice
BRANCH(S): Pharmacy
Time: 3 Hours
Max Marks: 75
Q.Code: R626

Answer Question No.1 (Part-I) 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

Q1 **Answer the following questions :** **(2 x 10)**

a) Define Idiosyncrasy.
b) Define and classify hospitals based on number of beds.
c) Write code of ethics for community pharmacy.
d) Write about beneficial interactions with examples.
e) What is patient compliance?
f) Define hospital formulary.
g) What is drug addiction?
h) What genetically determined toxicity.
i) What is drug dependence?
j) Classify the types of allergic drug reactions.

Part-II

Q2 **Focused-Short Answer Type Questions- (Answer Any Seven)** **(5 x 7)**

a) Define and classify ADRs.
b) Write notes on PTC.
c) What is the importance of communication skills for a Pharmacist?
d) Discuss rational use of over the counter medication.
e) Brief the functions and responsibilities of clinical pharmacist.
f) Explain Therapeutic drug monitoring.
g) How to prepare and implement budget in hospital.
h) Discuss the purchase procedure of Hospital.
i) Write the sources of drug information services.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Define Hospital. Write its organizational structure and explain services in details. **(10)**

Q4 Discuss in details Hematological parameters along with their significance. **(10)**

Q5 Give details on drug distribution system in hospital with special emphasis on in-patient and out-patient department. **(10)**

Q6 Explain various drug interactions in details with suitable examples. **(10)**

Registration No.: | | | | | | | | | | |

Total Number of Pages: 01

Course: B.Pharm
Sub_Code: BP704T

7th Semester Regular/Back Examination: 2024-25
SUBJECT: Novel Drug Delivery System
BRANCH(S): B.Pharm
Time: 3 Hours
Max Marks: 75
Q.Code: R634

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

Q1 **Answer the following questions:** **(2 x 10)**

a) Define NDDS and mention few advantages.
b) What are the limitations of TDDS?
c) Write the major drug release mechanisms from CR dosage forms.
d) What is Mucosal Drug Delivery system? Mention its usefulness.
e) Mention the importance of partition co-efficient in drug designing.
f) Differentiate between CR and SR.
g) Name the chemical cross linking agent mostly used for nano-preparation.
h) Mention the importance of niosomes.
i) What are the general characteristics of Ocular preparations?
j) Define implants.

Part-II

Q2 **Focused-Short Answer Type Questions - (Answer Any Seven)** **(5 x 7)**

a) Write mucosal permeation enhancers with examples
b) Write about Biological factors affecting controlled drug designing.
c) Explain in detail about solid lipid nanoparticles.
d) Discuss about Floating drug delivery system.
e) What is Ion exchange principle for drug release?
f) Differentiate in between liposomes and niosomes.
g) Mention the applications of monoclonal antibodies.
h) What are various approaches of transdermal drug delivery?
i) Define buccal drug delivery and write in detail about its components.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Define liposomes and classify them. Discuss various passive loading methods for its preparation. **(10)**

Q4 Define bio-adhesive drug delivery system. What are the various theories involved in bio-adhesion? Describe in detail. **(10)**

Q5 Define microencapsulation. Write the applications of microencapsulation. Explain phase separation-Coacervation technique. **(10)**

Q6 What is polymer? Classify it and write in detail polymer application in pharmaceutical Formulations. **(10)**