

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2023

Date: 02/01/2024

Course :	B. Pharm	Sem: VII	
Subject Name :	Instrumental Method of Analysis	Subject Code: BP701T	
Max Marks :	75	Duration :	3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

- i) Explain the principle of affinity chromatography.
- ii) Describe principle of gel chromatography.
- iii) Differentiate between normal phase and reversed phase chromatography.
- iv) Which type of columns are used in HPLC ?
- v) Describe ranges of UV-visible radiation?
- vi) Explain role of primary and secondary filters used in photofluorimeter ?
- vii) Define absorbance and transmittance along with their relationship with each other
- viii) "The R_f value of compound is always less than or equal to one" – Justify statement.
- ix) Explain derivation of Beer-Lambert's law.
- x) Discuss principle of capillary electrophoresis.

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

- i) Describe principle, FT-IR instrumentation and applications of IR spectroscopy.
- ii) Explain principle, instrumentation and applications of Gas Chromatography.
- iii) Describe fluorescence. Discuss factors affecting fluorescence. Explain application of fluorescence spectroscopy.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

- i) Describe different development techniques used in paper chromatography.
- ii) Write a note on different types of transitions in organic molecule.
- iii) Explain the principle, instrumentation of nepheloturbidimetry.
- iv) Explain the principle HPLC? Describe different pumps used in HPLC.
- v) Discuss principle, stationary phases and applications of ion exchange chromatography.
- vi) Explain principle, advantages, disadvantages and applications of TLC.
- vii) Differentiate between FES and AAS with respect to principle, instrumentation and applications.
- viii) What is spectroscopy? Explain different properties of electromagnetic radiation.
- ix) Discuss fundamental modes of vibrations in polyatomic molecule.

-----END OF THE PAPER-----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2023

Date:04/01/2024

Course : B. Pharmacy
Subject Name : Industrial Pharmacy II
Max Marks : 75

Sem: VII
Subject Code: BP702T
Duration : 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions) (10 x 2) = 20

- i) What is Quality risk management in pharmaceutical industry
- ii) What is GLP in Pharmaceutical industry
- iii) What is the Responsibility of Regulatory Affairs Professionals.
- iv) What is the meaning of QbD?
- v) Enlist various responsibilities of state licensing authority
- vi) What is NABL
- vii) What is granularity in TT process.
- viii) What is the difference between NDA and IND
- ix) What is the Quality risk management
- x) Give the importance of pilot plant scale up techniques

Q. 2. Long Answers (Answer 2 out of 3) (2 x 10) = 20

- i) Explain Central Drug Standard Control Organization (CDSCO)
- ii) What is Quality management system in pharmaceutical
- iii) Explain the Regulatory requirements and approval procedures for New.

Q. 3. Short Answers (Answer 7 out of 9) (7 x 5) = 35

- i) Explain platform technology
- ii) Write a note on SIDBI.
- iii) Write a note on Technology Transfer Protocol.
- iv) WHO guidelines for Technology Transfer(TT)
- v) What is Six Sigma concept.
- vi) Explain in short about ISO 9000 series.
- vii) Explain in detail about Certificate of Pharmaceutical Product (COPP)
- viii) Explain in detail including significance of personnel requirements, space require in pilot plant scale up techniques.
- ix) What is confidentiality agreement with suitable example

-----END OF THE PAPER-----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2023

Date:06/01/2024

Course: B. Pharmacy

Sem: VII

SubjectName: Pharmacy Practice

SubjectCode:BP703T

Max Marks: 75

Duration: 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

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- Q. 1. Objective Type Questions (Answer all the questions) (10 x 2) = 20**
- i) Define hospital as per WHO
 - ii) Define hospital pharmacy write functions of hospital pharmacist.
 - iii) Define adverse drug reaction write reasons for increasing ADR.
 - iv) Define Drug Interaction
 - v) Enlist drug interactions involved in gastric altered PH mechanism.
 - vi) Define community pharmacy enlist qualities of community pharmacist.
 - vii) Define hospital formulary enlist guiding principles of hospital formulary.
 - viii) Enlist drugs with high therapeutic index & drugs with low therapeutic index
 - ix) Write goals & need of medication history interview
 - x) Write duties of clinical pharmacist.
- Q. 2. Long Answers (Answer 2 out of 3) (2 x 10) = 20**
- i) Write statement of principles involved in the use of investigational drugs.
 - ii) Explain various techniques of inventory control.
 - iii) Write & discuss various types of classification of hospital.
- Q. 3. Short Answers (Answer 7 out of 9) (7 x 5) = 35**
- i) Write the roles & responsibilities of overall medical staff of hospital.
 - ii) Write the roles & responsibilities of hospital pharmacist.
 - iii) Write the reporting & processing of Adverse Drug Reaction.
 - iv) Discuss various legal requirement for the establishment & maintenance of drug store
 - v) Discuss policies & procedure for dispensing of controlled drug to in patient & outpatient department.
 - vi) Write the need & limitations of therapeutic drug monitoring
 - vii) Write the different methods for assessing of drug compliance.
 - viii) Write methods used for the analysis of drug expenditure.

ix) Write in detail economic order quantity.

-----END OF THE PAPER-----

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End Semester Examination – Supplementary/Regular Winter 2023

Date: 09/01/2024

Course: B. Pharmacy

Sem: VII

Subject Name: Novel Drug Delivery System

Subject Code: BP704T BP404T

Max Marks: 75

Duration: 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q.1 Solve the following.

(10x2 =20M)

1. Write factors affecting the formulation of Controlled release drug delivery systems
2. Define microsphere and microcapsules.
3. What are the stages in mucoadhesion?
4. Write the excipients in nasal spray formulations.
5. Write types of contact lenses.
6. Enlist applications of intrauterine drug delivery
7. What are the types of niosomes?
8. Write the criteria followed to select polymers for Controlled release drug delivery systems.
9. Write note on ALZET osmotic pump?
10. State basic components of transdermal drug delivery.

Q.2 Solve any two of the following

(2x10 = 20M)

1. Explain different formulation approaches of Transdermal drug delivery system.
2. Describe various theories of mucoadhesion with their significance in designing mucoadhesive products.
3. What are liposomes? Explain their characterization methods and applications in detail.

Q.3 Solve any seven of the following

(7x5 = 35M)

1. Classify the polymers used to modify the drug release.
2. Describe Ion Exchange Resins based controlled release formulation.
3. Write in detail about the microencapsulated drug delivery systems.
4. Describe the effervescent gastroadhesive drug delivery system.
5. Define and classify the different microparticulate drug delivery systems.
6. State various methods to prepare nanoparticles.
7. Write mechanisms of controlled drug release in ophthalmic drug delivery.
8. What are the advantages and disadvantages of intrauterine drug delivery systems?
9. What is a pulmonary route of administration? Explain in brief about drug powder inhalers.