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IM—02—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fourth Year) (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2025

INSTRUMENTAL METHODS OF ANALYSIS

Paper BP701T

(Tuesday, 11-11-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :- (1) *All questions are compulsory.*

(2) *Answer to the point only.*

(3) *Figures to the right indicate full marks.*

1. Answer the following :

10×2=20

(a) Which type of filter paper used in paper electrophoresis ?

(b) What are criteria of compounds analysed by gas chromatography ?

(c) Define :

(i) Auxochrome

(ii) Red Shift.

P.T.O.



- (d) What are fluorescent substance ?
- (e) Mention different IR regions.
- (f) Write principle of flame photometry.
- (g) State Hooke's law.
- (h) What is synthetic inorganic ion exchangers ?
- (i) Name the improved version of gel electrophoresis.
- (j) What are fluorogenic substances ?

2. Solve any *two* of the following : 2×10=20

- (a) Write advantages and limitations of the affinity chromatography.
- (b) Explain different types of absorption bands with examples in UV-visible spectroscopy.
- (c) Give instrumentation of IR spectroscopy.

3. Solve any *seven* of the following : 7×5=35

- (a) Draw schematic diagram and give the working of Du Pont Model 340 turbidimeter.
- (b) Describe different techniques for preparation of TLC plates.
- (c) Describe premix burner used in flame photometry.
- (d) How will you activates TLC plates ?



- (e) Write errors in flame photometry.
- (f) Write requirements in molecular structure for exhibiting fluorogenic activity.
- (g) Write advantages and disadvantages of column chromatography.
- (h) Write factors affecting fluorescence.
- (i) How TLC superior over other chromatographic techniques ?



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IM—06—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Final Year) (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2025

INDUSTRIAL PHARMACY

Paper II

(Thursday, 13-11-2025) (BP702T) Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (1) *All questions are compulsory.*

(2) *Answer to the point only.*

(3) *Figures to the right indicate full marks.*

1. Answer the following questions : 10×2=20

(a) State the objectives of pilot plant.

(b) What is Exhibit and Pre-exhibit batch ?

(c) Enlist various steps involved in technology transfers.

(d) What do you mean by QTTP and CQA ?

(e) What is Regulatory affairs ? State any *two* roles of R.A.

P.T.O.



- (f) What is bioavailability and bioequivalence study ?
- (g) State any *four* responsibilities of quality assurance department.
- (h) Enlist the functions of Central Drug Standard Control Organization (CDSCO).
- (i) What are the functions of State Licensing Authorities ?
- (j) What is SUPAC ? Give its significance.

2. Answer any *two* of the following : 2×10=20

- (a) Explain pilot plant scale up considerations for liquid oral formulation in detail.
- (b) Describe the organisation of CDSCO in detail.
- (c) Describe the concept of TQM with respect to its origin, principles, main objectives, advantages and disadvantages.

3. Answer any *seven* of the following : 7×5=35

- (a) Discuss the components of investigators brouchar.
- (b) Elaborate the role of RA professional in health authorities.
- (c) Write a note on six sigma concept and change control.
- (d) Elaborate the importance of reporting responsibility and space requirements in pilot plant.



- (e) Describe the scope of WHO guidelines for Technology transfer.
- (f) What is quality risk management ? Explain QRM process.
- (g) What are steps involved in obtaining ISO9000 series certification ?
- (h) Explain origin, scope and fundamentals of GLP.
- (i) Briefly explain the regulatory requirements for obtaining approval for the marketing of new drugs in India.



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IM—10—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fourth Year) (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2025

PHARMACY PRACTICE

Paper BP703T

(Saturday, 15-11-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (1) Answer *all* the questions.

(2) Figures to the right indicate full marks.

(3) Answer to the point only.

1. Answer the following questions :

10×2=20

(a) Define the term patient counselling.

(b) Define and classify adverse drug reaction.

(c) What are the roles of clinical pharmacist in ward rounds ?

(d) Define primary, secondary and tertiary hospital.

(e) What is Hospital Formulary ?

P.T.O.



- (f) Define lead time.
- (g) Give the general patient counselling information for NSAIDs.
- (h) Define Budget. Enlist objectives of Budget.
- (i) Define the terms :
- (i) Clinical Pharmacy and
- (ii) Therapeutic Drug Monitoring.
- (j) What is the significance of Drug Information Centre ?

2. Answer any *two* questions from the following : 2×10=20

- (a) Define Clinical Pharmacy. Explain in detail the functions and responsibilities of clinical pharmacist.
- (b) Define Hospital and enumerate the organization and functions of hospital.
- (c) Explain different types of drug distribution system in a hospital. What do you mean by Satellite Pharmacy ?

3. Answer any *seven* questions from the following : 7×5=35

- (a) Discuss in detail the functions of hospital pharmacy.
- (b) Describe in brief the rational use of common over the Counter Medications.



- (c) Mention the various laboratory blood tests. Explain their significance.
- (d) Give a comprehensive note on factors affecting Therapeutic Drug Monitoring.
- (e) Explain the steps involved in preparation of hospital formulary.
- (f) What is role of pharmacist in the medication adherence ?
- (g) Describe the various systems involved in the dispensing of drugs of inpatients.
- (h) Explain the roles and responsibilities of hospital pharmacist.
- (i) Define Inventory control. Specify the methods of inventory control.



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IM—14—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Final Year) (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2025

NOVEL DRUG DELIVERY SYSTEM

Paper 704T

(Tuesday, 18-11-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (1) *All questions are compulsory.*

(2) *Answer to the point only.*

(3) *Figures to the right indicate full marks.*

1. Solve the following :

10×2=20

(a) Define the term 'Controlled Release Drug Delivery System'.

(b) Define and classify polymers.

(c) Give advantages of microencapsulation.

(d) Give the concept of Mucoadhesion.

P.T.O.



- (e) Define Implants.
- (f) Give components of TDDS.
- (g) Define GRDDS.
- (h) Define and classify Liposomes.
- (i) Enlist Intraocular barriers.
- (j) Give advantages of IUDs.

2. Solve any *two* of the following : 2×10=20

- (a) Define TDDS. Explain different formulation approaches used in the development of TDDS.
- (b) Define microencapsulation. Enlist different methods of preparation. Explain Air Suspension method.
- (c) Explain different approaches of GRDDS.

3. Solve any *seven* of the following : 7×5=35

- (a) Describe different methods to overcome intraocular barriers.
- (b) Describe in brief applications of IUDs.
- (c) Discuss in brief about formulation of Inhalers.
- (d) Describe in brief different factors affecting permeation through skin.



- (e) Discuss in brief Alzet osmotic pump.
- (f) Write in brief about formulation consideration of buccal delivery system.
- (g) Give applications of Polymers.
- (h) Give advantages and disadvantages of controlled drug delivery system.
- (i) Enlist various targeted drug delivery system. Describe in brief concept of targeted drug delivery system.