BP 701 T

Number of Questions : 14] [Number of Pages : 02

IV/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, FEBRUARY – 2026

SEVENTH SEMESTER

INSTRUMENTAL METHODS OF ANALYSIS – THEORY

Time: 3 Hours Maximum : 75 Marks

SECTION – A

Answer any FIVE of the following questions.

Each question carries "TEN" marks. 5 x 10 = 50 M

01. Describe and derive the equation for Beer's – Lambert's law. Add a note on deviations and limitations of beers law.
02. Write a note on theory and applications of IR spectrophotometry. Explain different sampling techniques employed in IR spectroscopy.
03. Define and classify chromatography with suitable examples. Enlist and explain the various development techniques in paper chromatography.
04. Describe in brief the principle, instrumentation and applications of gas chromatography.
05. Explain the following: (a) Gel chromatography
    (b) Adsorption chromatography
06. What types of injector, pumps and detector systems are used in HPLC? Enlist its pharmaceutical importance.
07. Discuss the principle of fluorescence using Jablonski diagram. Explain the principle and interferences in Atomic spectroscopy.

SECTION – B

Answer any FIVE of the following questions.

Each question carries "FIVE" marks. 5 x 5 = 25 M

08. Define and distinguish between fluorescence and phosphorescence. Write the various factors affecting the phenomenon of fluorescence.
09. Explain the instrumentation and working of atomic absorption spectroscopy.
10. Explain the practical steps involved in TLC for separation of components.

11. What are ion exchange resins? Classify and explain the ideal properties of ion exchange resins.
12. Write the practical steps involved in size exclusion chromatography gel chromatography.
13. What is Quenching? Enumerate the various factors which influence quenching effect.
14. Define Wavelength, Bathochromic shift, Hypsochromic shift, Hyperchromic effect and Hypochromic effect.

BP 702 T

Number of Questions : 14] [Number of Pages : 01

IV/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, FEBRUARY – 2026

SEVENTH SEMESTER

INDUSTRIAL PHARMACY – THEORY

Time: 3 Hours Maximum : 75 Marks

SECTION – A

Answer any FIVE of the following questions.

Each question carries "TEN" marks. 5 x 10 = 50 M

01. What is a pilot plant? Explain the factors to be considered in the organization of a pharmaceutical pilot plant.
02. Discuss Regulatory requirement of NDA approval process. Write a note on WHO guidelines for Technology Transfer (TT).
03. What is validation? Write a detailed note on validation and calibration of analytical equipment.
04. Explain the significance of documentation in BA – BE studies and add a note on outsourcing BA and BE to CRO.
05. Explain how master formula records and batch manufacturing records are developed in pilot plant scale up studies.
06. Discuss the Granularity of TT Process for Active Pharmaceutical Ingredients (API) and excipients.
07. Explain the concepts of Total Quality Management and Quality by Design (QbD).

SECTION – B

Answer any FIVE of the following questions.

Each question carries "FIVE" marks. 5 x 5 = 25 M

08. Write a note on Platform Technology.
09. Explain the protocol for conduct of Non – clinical testing.
10. Explain six sigma concepts for Quality Improvement.
11. What is CDSCO? What are the different functions of CDSCO?
12. Explain the requirements for pilot plant scale up to Liquid Orals.
13. What are the conditions under which laboratories can be disqualified according to GLP?
14. Discuss the approval and implementation of Change control management System in Pharmaceutical Industry.

BP 703 T

Number of Questions : 14] [Number of Pages : 01

IV/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, FEBRUARY – 2026

SEVENTH SEMESTER

PHARMACY PRACTICE – THEORY

Time: 3 Hours Maximum : 75 Marks

SECTION – A

Answer any FIVE of the following questions.

Each question carries "TEN" marks. 5 x 10 = 50 M

01. Define and Classify Adverse drug reaction. Explain in detail the mechanism of type – A ADR with example.
02. Explain in detail the staff and Infrastructure Requirement for Community Pharmacy.
03. Enlist the various counseling points to be provided for a Diabetes and Hypertension Patient.
04. Explain the concept and scope of clinical Pharmacy. Classify ward round participation. Add a note on its significance.
05. Write the various abnormal constituents of urine and the diagnostic tests of it. Give the normal range and significance of the following:
    (a) RBC (b) ESR (c) PCV (d) Ferritin (e) Thrombocytes
06. Write a note on preparation and content of hospital formulary.
07. Describe the organizational structure of hospital.

SECTION – B

Answer any FIVE of the following questions.

Each question carries "FIVE" marks. 5 x 5 = 25 M

08. Write the role of blood bank and CSSR in a hospital.
09. What are the advantages and disadvantages of Individual prescription order system.
10. Give in detail the Interpretation of Prescribed Medication Order.
11. What are the Benefits and Risks associated with OTC drug use.
12. Discuss in detail the procurement and purchasing of drugs.
13. Enlist the various counseling points to be provided for a Diabetes and Hypertension patient.
14. Write a note on idiosyncrasy.

BP 704 T

Number of Questions : 14] [Number of Pages : 02

IV/IV B. PHARMACY (REGULAR) DEGREE EXAMINATIONS, FEBRUARY – 2026

SEVENTH SEMESTER

NOVEL DRUG DELIVERY SYSTEM – THEORY

Time: 3 Hours Maximum : 75 Marks

SECTION – A

Answer any FIVE of the following questions.

Each question carries "TEN" marks. 5 x 10 = 50 M

01. Describe the various physicochemical and pharmaceutical factors to be considered in selection of a drug candidate for controlled delivery formulations.
02. Define microencapsulation. Write the applications of microencapsulation. Explain phase separation – Coacervation technique.
03. Describe all the criteria to be considered for the selection of drugs to be formulated into a transdermal DDS with examples.
04. What are vesicular DDS of niosomes? Explain the advantages, disadvantages and applications.
05. Explain the characteristics of ocular drug delivery systems.
06. Explain the various requirements of drug candidate to be selected for formulation into controlled drug delivery system.
07. What is an implant? Explain the formulation of implants with a suitable example.

SECTION – B

Answer any FIVE of the following questions.

Each question carries "FIVE" marks. 5 x 5 = 25 M

08. Define controlled drug delivery systems with examples. Name any two ion exchange resins used in controlled drug delivery formulations.
09. Write a note on the formulation of buccal drug delivery systems.
10. Describe the components of transdermal DDS. Name two marketed transdermal products.

11. What is nasal drug delivery system? Write about its advantages and disadvantages.
12. Explain concept, advantages and disadvantages of liposomes.
13. Define ocular drug delivery system. Explain different types of ocular DDS.
14. Define nanoparticle? Write the importance of nanoparticles in target drug delivery systems with suitable examples.