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AM—02—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

INSTRUMENTAL METHODS OF ANALYSIS

BP–701T

(Monday, 16-12-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

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

(*ii*) Answer to the point only.

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

1. Answer the following : 10×2=20

(*a*) How will you prepare formazine ?

(*b*) Write composition of silica gelG.

(*c*) Mention name of improved version of gel electrophoresis.

(*d*) Which four carrier gases are used in gas chromatography.

(*e*) Write principle of separation in ion exchange chromatography.

(*f*) Define the following :

(*i*) Auxochrome

(*ii*) Red shift

P.T.O.

(*g*) What are fluorescent substance ?

(*h*) Mention different IR regions.

(*i*) Write principle of flame photometry.

(*j*) Give limitations of atomic absorption spectroscopy.

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

(*a*) Describe in detail about electronic transitions and excitation process in a UV-visible spectroscopy.

(*b*) Write applications of HPLC.

(*c*) Describe in detail about instrumentation of gas chromatography.

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

(*a*) Describe different monochromators used in UV-visible spectroscopy.

(*b*) Describe different radiation sources used in atomic absorption spectroscopy.

(*c*) Describe premix burner used in Flame photometry.

(*d*) Write interferences in flame photometry.

(*e*) Write a note on HETP.

(*f*) Describe sample injectors in HPLC.

(*g*) Write factors affecting ion-exchange resins.

(*h*) Write applications of electrophoresis.

(*i*) Give reasons for deviations from Beer's law.

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AM—06—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

INDUSTRIAL PHARMACY-II

BP–702-T

(Wednesday, 18-12-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 Hours *Maximum Marks—75*

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

(*ii*) Answer to the point only.

1. Answer the following : 10×2=20

(*a*) Write objectives of six-sigma.

(*b*) Write functions of CDSCO.

(*c*) Write elements of QbD.

(*d*) What do you mean by Drug Master File ?

(*e*) Write principles of total quality management.

(*f*) What is meaning of prospective validation ?

(*g*) What is Investigator's Brochure ?

(*h*) Write functions of regulatory authorities.

(*i*) Enlist benefits of ISO14000

(*j*) What is SUPAC ?

P.T.O.

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

(*a*) Describe details of investigational new drug (IND) application.

(*b*) Discuss QRM studies as per ICH Q9 guidelines.

(*c*) Discuss details of clinical research protocol.

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

(*a*) Explain different phases of Out of Specification (OOS)

(*b*) Write CDSCO guideline for BA and BE studies.

(*c*) Define TQM. What are key elements of TQM ?

(*d*) Write a note on central drug testing laboratories (CDTL)

(*e*) Write scope and objectives of COPP (certificate of pharmaceutical product)

(*f*) Write benefits of NABL accreditation.

(*g*) What are the responsibilities of RA professionals ?

(*h*) Write importance of QbD study.

(*i*) Explain modules of CTD.

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AM—10—2024

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharm. (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

PHARMACY PRACTICE

(Friday, 20-12-2024) (BP703T) Time : 2.00 p.m. to 5.00 p.m.

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.
(*ii*) Answer to the point only.
(*iii*) Illustrate your answer with neat sketch wherever necessary.

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

(*a*) What is the purpose of medical records ?

(*b*) Write the objectives of hospital formulatory system.

(*c*) Enlist paramedical services in hospital.

(*d*) Give the various clinical services in hospital.

(*e*) What are functions of hospital pharmacy ?

(*f*) Classify the adverse drug reaction.

(*g*) Draw the flow chart of out-patient services in hospital.

(*h*) What is Morisky's medication adherence scale ?

(*i*) Differentiate between generic name and branded name drugs.

(*j*) What are the risks associated with use of OTC drug.

P.T.O.

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

(*a*) Write in detail about composition, function and role of pharmacy therapeutic committee in drug safety.

(*b*) Write role of hospital pharmacist in the clinical evaluation of a drug and give classification of drugs according to adoption in hospital.

(*c*) Define prescribe medication order and write a note on legal requirement and interpretation of prescribed medication order.

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

(*a*) Write a short note on techniques of budget and give its advantages and disadvantages.

(*b*) Describe function and responsibilities of clinical pharmacist.

(*c*) Explain misuse and abuse of OTC drug and give the risks associated with OTC use.

(*d*) Describe dipstick urinalysis.

(*e*) Explain method of detecting adverse drug effects.

(*f*) What are the legal requirements for the establishment of drug store ?

(*g*) Define HF and write guideline for hospital formulary system.

(*h*) Explain how computers help in drug information retrieval and storage.

(*i*) Define patient counseling ? Give its objective and function.

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AM—14—2024

FACULTY OF PHARMACEUTICAL SCIENCES

D.Pharm. (Seventh Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

NOVEL DRUG DELIVERY SYSTEM

BP-704T

(Monday, 23-12-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.
(*ii*) Answer to the point only.
(*iii*) Figures to the right indicate full marks.
(*iv*) Illustrate your answers with neat sketch labelled diagrams wherever necessary.

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

(*a*) What are stages of mucoadhesion ?

(*b*) State disadvantages of implantable drug delivery system.

(*c*) What are monoclonal antibodies ?

(*d*) Enlist applications of intrauterine drug delivery.

(*e*) What are selection criterias of drug to develop as CRDDS ?

(*f*) Define liposomes with examples.

(*g*) Write advantages of Nano-particles in durg delivery system.

(*h*) Enlist various approaches of transdermal drug delivery system.

(*i*) Enlist types of nebulisers

(*j*) Enlist excipients used in nasal spray.

P.T.O.

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

(*a*) Define CRDDS. Explain various approaches to formulate dissolution and diffusion based controlled release drug delivery system.

(*b*) What are GRDDS. Enlist the approaches of GRDDS and explain any *one* of them.

(*c*) Define microencapsulation. Write in detail about air-suspension method.

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

(*a*) Define and classify polymers used in CRDDS.

(*b*) Define permeation enhancer and describe in brief different factors affecting permeation through skin.

(*c*) What are the components of transdermal drug delivery system ?

(*d*) What are occuserts ? Write the challenges in delivering drug to the eye.

(*e*) Classify various intrauterine drug delivery system.

(*f*) Explain theories of mucoadhesion.

(*g*) Write advantages and disadvantages of nasal drug deliver system.

(*h*) Write a note on Alzet osmotic pump.

(*i*) Explain the biological factors affecting CRDDS.