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SP-02-2024

FACULTY OF SCIENCE AND TECHNOLOGY

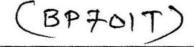
B.Pharm. (Seventh Semester) EXAMINATION

APRIL/MAY, 2024

INSTRUMENTAL METHODS OF ANALYSIS

Paper BP101-T

(Tuesday, 14-05-2024)



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

Time-Three Hours

Maximum Marks-75

- Note: (i) All questions are compulsory.
 - (ii) Write to the point only.
 - (iii) Figures to the right indicate full marks.
 - (iv) Mobiles/phones/digital watch are strictly prohibited.
- 1. Answer all the following questions:

 $10 \times 2 = 20$

- (a) Explain the following terms:
 - (i) Chromophore and blue shift
 - (ii) Rf value
- (b) Distinguish between TLC and paper chromatography.

P.T.O.

- (c) What is affinity chromatography?
- (d) What is difference between Raman spectroscopy and IR spectroscopy?
- (e) What is principle of Nephelometry and Turbidimetry.
- (f) What is quenching? Write down the application of Flurometry.
- (g) What is Chromatography? What are applications of ion exchange chromatography?
- (h) Define electrophoresis and enlist the factors affecting electrophoretic mobility.
- (i) What is Hooke's law and simultaneous equation method of analysis?
- (j) What is single component and multicomponent analysis?
- 2. Answer the following (any two): $2\times10=20$
 - (a) Discuss different types of molecular vibrations and detail different sample handling tech. in IR spectroscopy.
 - (b) Write in detail instrumentation, sources of radiation, wavelength selectors and different detectors in UV visible spectroscopy.
 - (c) Discuss in brief methodology, advantages, disadvantages and applications of adsorption and partition column chromatography.

3. Answer the following (any seven):

- $7 \times 5 = 35$
- (a) Write down the principle, instrumentation and application of the flame photometry.
- (b) What is Beer and Lambert's law? Explain derivation and deviations.
- (c) Discuss in brief about principle of interference instrumentation and application of atomic absorption spectroscopy.
- (d) Write in detail about introduction, instrumentation and application of gel chromatography.
- (e) What are the types of ion exchange resins? Discuss different factors affecting ion exchange resins.
- (f) Write down the preparation, activation of TLC plate and development technique in TLC.
- (g) Write about different development techniques and detection technique in paper chromatography.
- (h) Discuss different types of column in gas chromatography. What is programmed temperature gas chromatography.
- (i) Write in detail about instrumentation and applications of Nepheloturbidometry.

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SP-06-2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2024

INDUSTRIAL PHARMACY-II

(Thursday, 16-05-2024) (BP-7027) Time: 2.00 p.m. to 5.00 p.m.

Time-Three Hours

Maximum Marks-75

- Note: (i) All questions are compulsory.
 - (ii) Answer to the point only.
 - (iii) Figures to the right indicate full marks.
- 1. Solve the following:

 $10 \times 2 = 20$

- (a) Give the functions of pilot plant.
- (b) Define sending unit and receiving unit.
- (c) Enlist responsibilities of drug development team.
- (d) What is Copp?
- (e) Mention any four characteristics of TQM.
- (f) What is standard operating procedure?
- (g) What do you mean by QbD and CGMP?
- (h) Enlist any four quality certifications.

P.T.O.

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- (i) What do you mean by investigators brochure?
- (j) Define regulation and regulatory affairs.
- 2. Solve any two of the following:

 $2 \times 10 = 20$

- (a) Explain various stages involved in TT in pharmaceutical industry.
- (b) Discuss pilot plant scale up consideration for solid dosage form.
- (c) Describe regulatory requirement approval for obtaining NDA.
- 3. Solve any seven of the following:

 $7 \times 5 = 35$

- (a) Discuss the type of changes under SUPAC guidelines.
- (b) Explain in detail quality risk management.
- (c) Write a note on six sigma concept.
- (d) Give the functions or role of CDSCO.
- (e) Discuss the benefits of NABL accrediation.
- (f) Describe the scope of WHO guidelines.
- (g) Explain analytical method exchanged in technology transfer.
- (h) Discuss the fundamentals of GLP.
- (i) Write about qualities and key duties of RA officer.

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SP-14-2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Seventh Semester) EXAMINATION

APRIL/MAY, 2024

NOVEL DRUG DELIVERY SYSTEM

(Tuesday, 21-05-2024)

(BP704T)

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

Time-Three Hours

Maximum Marks-75

- Note: (i) All questions are compulsory.
 - (ii) Draw appropriate diagram/charts wherever necessary.
 - (iii) Answer to the point only.
- 1. Answer the following:

 $10 \times 2 = 20$

- (a) Define controlled drug delivery system.
- (b) Classify liposomes.
- (c) Write applications of targeted drug delivery system.
- (d) Write merits of mucoadhesive drug delivery system.
- (e) Define microspheres and micro-capsules.
- (f) Define floating time and floating lag time.

P.T.O.

- (g) Define nebulizer.
- (h) State Higuchi model.
- (i) Write applications of micro-encapsulations.
- (j) Define bioresponsive drug delivery system.
- 2. Answer any two questions:

 $2 \times 10 = 20$

- (a) Discuss classification and application of polymers used in CDDS.
- (b) Explain the approaches used in development of GRDDs.
- (c) Explain in detail coacervation phase separation method.
- 3. Answer any seven:

 $7 \times 5 = 35$

- (a) Explain principles of Mucoadhesion.
- (b) Write about production of monoclonal antibodies.
- (c) Explain about intrauterine devices.
- (d) Write a short note on Alzet osmotic pump.
- (e) Write a note on metered dose inhaler.
- (f) Describe factors considered in development of TDDs.
- (g) Write a short note on ocuserts.
- (h) Discuss in brief nano-particles.
- (i) Give the applications of liposomes.

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