

Total No. of Questions : 3]

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SEAT No. :

PA-883

[5940]-7001

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Fourth Year B. Pharmacy

BP701T : INSTRUMENTAL METHODS OF ANALYSIS

(2019 Pattern) (Semester - VII)

Time : 3 Hours]

[Max. Marks : 75

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Neat diagram must be drawn wherever necessary.

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Q1) Attempt the following. (Any 5)

[5×3=15]

- a) Explain the term chromophore and Auxochrome with suitable example.
- b) Discuss the concept of adsorption and partition chromatography.
- c) Discuss the advantages of HPTLC over TLC. <https://pharmacyindia.co.in/>
- d) Explain the concept of singlet and triplet electronic state.
- e) Write the principle involved in ion exchange chromatography.
- f) Discuss the importance of temperature programming in GC.
- g) Describe the importance of term retention factor and retention time in detail. <https://pharmacyindia.co.in/>

Q2) Answer the following. (Any 2)

[2×10=20]

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- a) Draw a neat labeled diagram of flame photometer. Explain the functioning of each part. Write application of flame photometry. <https://pharmacyindia.co.in/>
- b) Describe the principle, instrumentation and applications of HPLC.
- c) Explain the phenomenon of fluorescence and phosphorescence with the help of neat labelled diagram. Discuss the factors affecting the phenomenon of fluorescence. <https://pharmacyindia.co.in/>
- d) Describe the ideal requirements of detector. Discuss in brief about various detectors used in IR spectroscopy.

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P.T.O.

Q3) Attempt the following. (Any 8)

[8×5=40]

- a) Draw a neat labeled diagram of fluorimeter and explain the functioning of each part.  
<https://pharmacyindia.co.in/>
- b) Discuss the various development techniques used in.
  - i) Paper chromatography
  - ii) Thin layer chromatography
- c) Write a note on:
  - i) Columns in GC
  - ii) System suitability parameters
- d) Write a note on: <https://pharmacyindia.co.in/>
  - i) Affinity chromatography
  - ii) Column chromatography
- e) Discuss the construction and working of double beam UV-Visible spectrophotometer.  
<https://pharmacyindia.co.in/>
- f) State Beer-Lamert's Law and explain the deviations leading from it.
- g) Give a brief account on Nepheloturbidometry.
- h) Discuss the instrumentation of AAS.
- i) Write a note on <https://pharmacyindia.co.in/>
  - i) Multi component method of analysis.
  - ii) Quenching of fluorescence.
- j) Discuss in detail various types of electronic transitions in UV-Visible spectrophotometry.

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SEAT No. :

**PA-2609**

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**Final Year B. Pharmacy**

**INDUSTRIAL PHARMACY - II**

**(2019 Pattern) (Semester - VII) (BP702T)**

*Time : 3 Hours]*

*[Max. Marks : 75*

*Instructions to the candidates:*

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- 1) *All Questions are compulsory.*
- 2) *Neat labeled diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*

**Q1) Objective Type Questions (Answers 5 out of 7):**

**[5×3=15]**

- a) What is platform technology?  
<https://pharmacyindia.co.in/>
- b) What are the goals of quality management system?
- c) Enlist methods of risk management.  
<https://pharmacyindia.co.in/>
- d) What is performance qualification?
- e) What are the dimensions of quality?
- f) What is vertical technology transfer?
- g) What are the benefits of ISO 14000?

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**Q2) Long Answers (Answer 2 out of 4):**

**[2×10=20]**

- a) What is technology transfer? Explain granularity of tech transfer.
- b) Describe documentation required in technology transfer.  
<https://pharmacyindia.co.in/>
- c) Explain the regulatory approval process for New Drug Application.
- d) Explain the elements of ISO 9000 : 2000?

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**P.T.O.**

Q3) Short Answers (Answer 8 out of 10):

[8×5=40]

- a) Describe SUPAC SS level 1 changes for change in batch size.
- b) What is technology transfer? <https://pharmacyindia.co.in/>
- c) Write a note on technology transfer agencies in India.
- d) Describe impact of change in equipment as per SUPAC.  
<https://pharmacyindia.co.in/>
- e) What is the certification process in accordance with ISO 9001?
- f) Explain the organization and functions of CDSCO.
- g) What is GLP and discuss the same. <https://pharmacyindia.co.in/>
- h) Explain the concepts of six sigma for Quality Improvement.
- i) What is clinical research protocols and data presentation?  
<https://pharmacyindia.co.in/>
- j) Write short note on various phases of clinical trials.

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PA-884

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Fourth Year B. Pharmacy  
BP703T : PHARMACY PRACTICE  
(2019 Pattern) (Semester - VII)

Time : 3 Hours]

[Max. Marks : 75

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.

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Q1) Objective type questions (Any 5 out of 7)

[15]

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- a) Comment on beneficial drug- drug interactions. <https://pharmacyindia.co.in/>
- b) List advantages of hospital formulary system.
- c) Enlist the responsibilities and functions of hospital pharmacist.
- d) Describe the role of pharmacist in the education and training program in the hospital. <https://pharmacyindia.co.in/>
- e) Summarize the risk factors for drug interactions.
- f) Describe the organizational structure of hospital pharmacy.
- g) Define over the counter (OTC) medicine and give the basic criteria for sale of OTC medicines. <https://pharmacyindia.co.in/>

Q2) Long Answer (Answers any 2 out of 4)

[20]

<https://pharmacyindia.co.in/>

- a) Classify adverse drug reactions and discuss monitoring and reporting system of ADR in India.
- b) Discuss in detail the organization and functions of pharmacy and therapeutic committee. <https://pharmacyindia.co.in/>
- c) Enlist the objectives of drug store and discuss the layout, types of material stocked and storage conditions for different material in drug store.
- d) Explain the drug therapy monitoring by clinical pharmacist.

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P.T.O.

Q3) Short answers (Any 8 out of 10) [40]

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- a) Explain pharmacokinetic type of drug interactions with examples.
- b) Discuss hospital formulary management principles and process for selecting new medicines in formulary. <https://pharmacyindia.co.in/>
- c) Define medication adherence and explain the role of pharmacist in patient medication adherence. <https://pharmacyindia.co.in/>
- d) Discuss the concept of therapeutic drug monitoring (TDM) and characteristics of drug applicable for TDM.
- e) Discuss the resources for drug information and steps for approaching drug information enquiries.
- f) Discuss role and responsibilities of community pharmacist.
- g) Comment on arrangement of drugs in drug store.
- h) Describe the stages of patient counseling. <https://pharmacyindia.co.in/>
- i) Discuss the rational use of common over the counter medications.
- j) Comment on the clinical significance of kidney function tests and lipid profile tests.

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SEAT No. :

PA-2619

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Final Year B.Pharmacy

NOVEL DRUG DELIVERY SYSTEM

(2019 Pattern) (Theory) (Semester - VII) (BP-704T)

Time : 3 Hours]

[Max. Marks : 75

Instructions to the candidates:

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- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.

Q1) Answer the following (Solve Five out of Seven)

[5×3=15]

- a) What factors affect the designing of modified drug delivery system?
- b) Explain different ideal properties of bioadhesive polymers.  
<https://pharmacyindia.co.in/>
- c) Define and compare, active and passive targetting?
- d) Classify Liposome according to structure?
- e) Describe nanoparticles along with their general properties.
- f) What are the disadvantages of conventional ocular drug delivery system.
- g) What is targetted drug delivery? Give its application.

<https://pharmacyindia.co.in/>

Q2) Answer in detail (Ans Two out of four)

[2×10=20]

- a) Discuss in detail types of ocular drug delivery system?
- b) Explain preparation and application of monoclonal Antibodies?
- c) Explain in detail different methods for formulation of TDDS along with evaluation?
- d) Explain in detail formulation & evaluation of nanoparticles.

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P.T.O.

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Q3) Answer the following in brief (Any 8 out of 10)

[8×5=40]

- a) Explain the different barrier in ocular drug delivery. <https://pharmacyindia.co.in/>
- b) What are advantages and disadvantages of implantable drug delivery system. <https://pharmacyindia.co.in/>
- c) Explain the different theories of mucoadhesion.
- d) Write a short note on biodegradable polymers.
- e) Explain controlled and sustained drug delivery in detail.
- f) Explain metered dose inhaler (MDI) <https://pharmacyindia.co.in/>
- g) Explain glass transition temperature and TGA of polymer.
- h) What are temperature and pH responsive polymers? Explain.
- i) What are ion exchange resins. Give their mechanism.
- j) Write short note on evaluation properties of niosomes.

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