

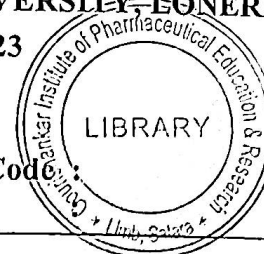
DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Summer 2023

Date: 09/06/2023

Course : B. Pharmacy
Subject Name : Instrumental Methods of Analysis
Max Marks : 75

Sem: VII
Subject Code: BP 701T
Duration: 3 Hr.



Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

D. Pharma University Exam Papers | B. Pharma University Exam Papers | GPAT, NIPER, Pharmacist, Drug Inspector Exam Papers | Previous Year Exam Papers | Latest Pharma Job | Pharma Colleges | Pharma News | Pharma Quiz

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Q. 1. Objective Type Questions (Answer all the questions) <https://pharmacyindia.co.in/> (10 x 2) = 20

- i) Name the spectral shifts that occur in UV region.
- ii) Differentiate between isocratic and gradient elution in chromatography.
- iii) Define derivatization. List methods of derivatization in Gas Chromatography
- iv) Mention equations for Beer's and Lambert's Law. <https://pharmacyindia.co.in/>
- v) Define quenching. List factors affecting quenching.
- vi) Enlist any four the applications of Atomic Absorption spectroscopy.
- vii) Distinguish between nephelometry and turbidimetry.
- viii) Justify- buffers are used in ion exchange chromatography.
- ix) Define R_f value. Enlist the factors that affect R_f value.
- x) How aldehyde and ketone can be differentiated in IR spectrum.

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(2 x 10) = 20

Q. 2. Long Answers (Answer 2 out of 3)

- i) Discuss the principle, instrumentation and applications of HPLC.
- ii) Explain the principle, instrumentation, sampling techniques of IR spectroscopy.
- iii) Describe in brief the principle, instrumentation and applications of gas chromatography.

(7 x 5) = 35

Q. 3. Short Answers (Answer 7 out of 9)

- i) Discuss the principle of fluorescence using Jablonski diagram.
- ii) Define and classify Ion Exchange resins with examples. <https://pharmacyindia.co.in/>
- iii) Describe different development techniques used in Paper Chromatography.
- iv) Explain the principle, theory and applications of gel chromatography.
- v) Explain in brief the various types of electronic transitions occur in UV-Visible spectroscopy.
- vi) Elaborate the different vibrational modes in polyatomic molecules upon IR absorption
- vii) Describe the TLC with different methods for preparations of TLC plates.
- viii) Differentiate between adsorption and partition column chromatography. <https://pharmacyindia.co.in/>
- x) Discuss the principle and interferences occurs in flame photometry

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