

B.Sc. III Year
SEMESTER - VI
SUBJECT-PHARMACEUTICAL CHEMISTRY
DRUG ANALYSIS

Max.Marks:85

Min. Marks:28

UNIT I

Chromatography: Principles of Separation Processes and Application of Techniques Viz Thin Layer Chromatography, Gas Chromatography, Paper Chromatography, Ion Exchange Chromatography and HPLC.

UNIT-II

Instrumental Techniques: Definition, Principles, Instrumentation & Pharmaceutical Application of Nephelometry and Turbidimetry, Potentiometry, Conductometry, Polarography & Colorimetry.

UNIT-III

Spectroscopic Method: Principle, Instrumentation and Applications of NMR, UV-Vis and IR Spectroscopy.

UNIT-IV

Statistical Validation:-

Errors: Introduction, Classification, Distribution of Random Numbers, Significant Figures, Comparison of Results, Methods of Least Square, Method of collection of data.

Graphical representation of data- Frequency Polygon & histogram. Measure of central tendency - Mean Median & mode. Standard deviation and Variance.

UNIT-V

Methods for determination of purity of pharmaceutical compounds: Introduction, Types of impurity, Methods of checking purity .Volumetric and Gravimetric Assay Procedures of following Compounds from Indian Pharmacopoeia-Acetazolamide, Adrenaline, Amitriptyline Dichloride. Amidoquine, Chloroquine phosphate, Diazepam, Ethacrynic acid,Isoniazide, Calcium Gluconate and Ferrous Fumarate.

Books Recommended

1. F.S.K. Barar. Essentials of Pharmacotherapeutics, S. Chand and Company Ltd. New Delhi.
2. Stenlake & Beckett, Practical Pharmaceutical Chemistry Part I, CBS Publishers and Distributors, New Delhi.
3. R.S. Satoshkar, S. Bhandarkar, S.S. Ainpuri, Pharmacology & Pharmacotherapeutics, Mumbai popular prakashan.
4. O.P. Agrawal Advanced Organic Practical, Goyal Publishing House, Meerut (U.P.)
5. Gurdeep Raj, Advanced Inorganic Practical, Goyal Publishing House, Meerut (U.P.)
6. Gurdeep Raj Chatwal and Sham K. Anand, Instrumental methods of chemical analysis Himalya Publishing House.

B.Sc. III Year
PHARMACEUTICAL CHEMISTRY: SEMESTER VI
PRACTICAL

Examination: 4 hours

Max. Marks:50

I	Preparation and Synthesis :	12 Marks
	(i) Methyl Orange	
	(ii) Benzil	
	(iii) Benzoic Acid	
	(iv) Dextrose Injection	
	(v) Calamine Lotion	
	(vi) Vanishing Cream	
	(vii) Muscle relaxant	
II	Assay:	12 Marks
	(i) Milk of Magnesia.	
	(ii) Ascorbic Acid.	
III	Instrumentation:	06 Marks
	(i) Dissolution time apparatus	
	(ii) Friabilator	
	(iii) Colorimeter	
IV	Chromatography:	06 Marks
	(i) o and p-nitro Aniline by TLC.	
	(II) Inorganic ions by Radial Chromatography.	
	(iii) TLC of food dyes.	
V	Viva-voce	06 Marks
VI	Practical record	08 Marks