

DEPTH OF BIOLOGY

B. PHARMACY

1 SEM IMPORTANT QUESTIONS

PHARMACEUTICAL ANALYSIS

UNIT-I

(a) Pharmaceutical analysis- Definition and scope

- i) Different techniques of analysis
- ii) Methods of expressing concentration
- iii) Primary and secondary standards.
- iv) Preparation and standardization of various molar and normal solutions-
Oxalic acid, sodium hydroxide, hydrochloric acid, sodium thiosulphate, sulphuric acid, potassium permanganate and ceric ammonium sulphate

(b) Errors: Sources of errors, types of errors, methods of minimizing errors, accuracy, precision and significant figures

(c) Pharmacopoeia, Sources of impurities in medicinal agents, limit tests.

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10 MARKS

1. Define error it's source, types and the process or method to minimize error

5 MARKS

1. Write the preparation and standardization method of oxalic acid ,
NaOH

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2 MARKS

1. Define primary and secondary standard
2. What is error?
3. Define precision
4. What is significant figure?
5. Definition of analysis
6. Define limit test

UNIT-II

- **Acid base titration:** Theories of acid base indicators, classification of acid base titrations and theory involved in titrations of strong, weak, and very weak acids and bases, neutralization curves
- **Non aqueous titration:** Solvents, acidimetry and alkalimetry titration and estimation of Sodium benzoate and Ephedrine HCl

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10 MARKS

1. Define neurtrilization curve
2. Write theories of acid /base indicator

5 MARKS

1. Define non aqueous titration
2. Difference between acidimetry and alkalimetry Titration
3. Write estimation of sodium benzoate and epihedrine HCl

UNIT-III

- **Precipitation titrations:** Mohr's method, Volhard's, Modified Volhard's, Fajans method, estimation of sodium chloride.
- **Complexometric titration:** Classification, metal ion indicators, masking and demasking reagents, estimation of Magnesium sulphate, and calcium gluconate.
- **Gravimetry:** Principle and steps involved in gravimetric analysis. Purity of the precipitate: co-precipitation and post precipitation, Estimation of barium sulphate.
- Basic Principles, methods and application of diazotisation titration.

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10 MARKS

1. Define precipitation titration
2. Difference between volhard and modified volhard method
3. Define complexometric titration
4. Define gravimetry, Explain its principle, method and application

5 MARKS

1. Define fajan's method
2. Difference between masking and de masking agent
3. Write estimation of BaSO_4

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4. Write down the estimation of MgSO_4 & Ca gluconate

2 MARKS

1. Write estimation of NaCl

UNIT-IV

Redox titrations

(a) Concepts of oxidation and reduction

(b) Types of redox titrations (Principles and applications)

Cerimetry, Iodimetry, Iodometry, Bromatometry, Dichrometry, Titration with potassium iodate

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10 MARKS

1. Define redox titration, also define its types
2. Difference between iodimetry and iodimetry

5 MARKS

1. Define dichrometry
2. Define bromatometry
3. Define Titration with potassium iodate

2 MARKS

1. Define cerimetry

UNIT-V

- **Electrochemical methods of analysis**
 - **Conductometry**- Introduction, Conductivity cell, Conductometric titrations, applications.
 - **Potentiometry** - Electrochemical cell, construction and working of reference (Standard hydrogen, silver chloride electrode and calomel electrode) and indicator electrodes (metal electrodes and glass electrode), methods to determine end point of potentiometric titration and applications.
 - **Polarography** - Principle, Ilkovic equation, construction and working of dropping mercury electrode and rotating platinum electrode, applications

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10 MARKS

1. Define conductometry, it's introduction and application
2. Define potentiometer

5 MARKS

1. Explain the construction, working , advantage of
 - A. Calomel electrode
 - B. Metal electrode
 - C. Dipping Hg electrode
2. Define electrochemical cell

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2 MARKS

1. Write the ilkovic equation
2. Define polarography