

2.3 TEACHING LEARNING PROCESS

2.3.1 LEARNING THROUGH PROBLEMS SOLVING METHOD

STUDENT CENTRIC COMPONENT OF LEARNING ACTIVITIES

S.NO	PARTICULAR	PAGE NO
1	Experimental Learning Activities 1.1 Lab Practical 1.2 Science Expo 1.3 Industrial Visit 1.4 Inplant Training 1.5 Bank Visit	 2-4 5 5 6 6
2	Participatory Learning Activities 2.1 Workshop 2.2 Seminar 2.3 Group Discussion 2.4 Short Film	 7 7 8 8
3	Problem Solving Activities 3.1 Project 3.2 Reading Magazines (self learning)	 9 9

EXPERIMENTAL LEARNING ACTIVITIES

1.1 LAB PRACTICAL - PHYSICS

PRACTICAL - II INORGANIC SEMI MICRO QUALITATIVE ANALYSIS (Examination at the end of IV semester)

Credits -2
Max. Marks 100

Hours/Week: 2
Ext: 75 + Int: 25

Objectives

1. To enable the students to develop analytical skills in inorganic qualitative analysis.
2. To appreciate the various colored chemical reactions of metal ions.

Semi micro qualitative analysis:

1. Training sessions for three classes: Mixture of anions containing an interfering anion and its elimination technique. Mixture of cations of simple radicals to familiarize with the inter group separation techniques.
2. Semi micro qualitative analysis of inorganic salt mixtures containing two anions (one interfering) and two cations.
3. Simple anions: carbonate, nitrate, sulphate, sulphide, sulphite, chloride and bromide.
4. Interfering anions: borate, fluoride, oxalate, phosphate, arsenite and chromate.
5. Cations:
 - a. Group I cations: lead
 - b. Group II cations: lead, copper, cadmium, bismuth, antimony and tin.
 - c. Group III cations: aluminium, ferrous, ferric and chromium.
 - d. Group IV cations: cobalt, nickel, manganese and zinc.
 - e. Group V cations: barium, strontium and calcium
 - f. Group VI cations: magnesium and ammonium.

Scheme of evaluation: (Max. Marks 100)

Internal Assessment 40 Marks

Regularity	20 Marks
Class Test	15 Marks
Observation Note	5 Marks
Total	40 Marks

External Examination: 60 Marks (3 Hours)

Record Note Book	10 Marks
Reporting 4 ions with procedure 4 x 12.5	50 Marks

LAB PRACTICAL – CS

CS6: Lab 5: Java Programming

(4 Hours – 3 Credits)

Section: A

Write Programs in Java for the following:

1. To implement a simple temperature conversion program.
2. To perform addition and subtraction of complex numbers using class and objects.
3. To perform volume calculation using method overloading.
4. Using command line arguments, test if the given string is palindrome or not.
5. String manipulation using String Methods (Use of any five String methods are preferred).
6. Write a program to fill names into a list .Also, copy them in reverse order into another list. If the name contains any numeric value throw an exception “Invalid Name”
7. Program to demonstrate the use of any two built-in exceptions in Java.

Section: B

1. To perform multiplication of matrices using class and objects.
2. Using multilevel inheritance process student marks.
3. Implement multiple inheritance for payroll processing.
4. Implement interface for area calculation for different shapes.
5. Create a package called “Arithmetic” that contains methods to deal with all arithmetic operators. Also write a program to use the package.
6. Create two threads such that one of the thread generate Fibonacci series and another generate perfect numbers between two given limits.
7. Define an exception called “: **Marks Out of bound:**” Exception, that is thrown if the entered marks are greater than 100.
8. Program to demonstrate the use of Wrapper class methods.
9. File Processing using Byte stream.
10. File Processing using Character Stream.
11. Write applets to draw the following Shapes:
(a). Cone (b). Cylinder (c). Square inside a Circle (d). Circle inside a Square
12. Write an applet Program to design a simple calculator.
13. Write an Applet Program to animate a ball across the Screen.

LAB PRACTICAL – CHEMISTRY

- d. Group IV cations: cobalt, nickel, manganese and zinc.
 e. Group V cations: barium, strontium and calcium
 f. Group VI cations: magnesium and ammonium.

Scheme of evaluation: (Max. Marks 100)

Internal Assessment 40 Marks

Regularity	20 Marks
Class Test	15 Marks
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External Examination: 60 Marks (3 Hours)

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V SEMESTER
 CORE PAPER – V
 ORGANIC CHEMISTRY II

Credits –4
 Max. Marks 100
 OBJECTIVES

Hours/Week: 4
 Ext: 75 + Int: 25

1. To study the preparation and reactions of hydroxyl compounds
2. To learn the chemistry of ethers, aldehydes and ketones
3. To understand the chemistry of carboxylic acids
4. To know the properties and structure of carbohydrates
5. To learn about nitrogen containing compounds.

UNIT I: HYDROXY COMPOUNDS

- a. Alcohols: Preparation of alcohols from Grignard reagent, by reduction of carbonyl compounds, by ester hydrolysis, and by hydroboration - Reactions: with metals, HX, dehydration, oxidation reactions.
- b. Phenols: Classification and nomenclature, Preparation: From sulphonic acids and Diazonium salts. Reactions: Acidity, effect of substituents on the acidity of phenol - Reimer-Tiemann reaction, Electrophilic Substitution reactions: Nitration, halogenation, sulphonation - Hoesch reaction, Kolbe reaction, Schotten-Baumann reaction.
- c. Preparation and properties of Naphthols and alizarin

1.2 DEPARTMENT OF BBA - SCIENCE EXPO



1.3 DEPARTMENT OF FASHION TECHNOLOGY - INDUSTRIAL VISIT



STUDENT CENTRIC COMPONENT OF LEARNING ACTIVITIES

1. EXPERIMENTAL LEARNING ACTIVITIES

1.4 DEPARTMENT OF MICROBIOLOGY - INPLANNED TRAINING



1.5 DEPARTMENT OF COMMERCE – BANK VISIT



STUDENT CENTRIC COMPONENT OF LEARNING ACTIVITIES

2. PARTICIPATORY LEARNING ACTIVITIES

2.1 DEPARTMENT OF CHEMISTRY - WORKSHOP



2.2 DEPARTMENT OF COMPUTER APPLICATION – SEMINAR



STUDENT CENTRIC COMPONENT OF LEARNING ACTIVITIES

2. PARTICIPATORY LEARNING ACTIVITIES

2.3 DEPARTMENT OF COMPUTER SCIENCE - GROUP DISCUSSION



2.4 DEPARTMENT OF BCOM (CA) – SHORT FILM



<https://youtu.be/LANCYA2PwTk>

STUDENT CENTRIC COMPONENT OF LEARNING ACTIVITIES

3. PROBLEM SOLVING ACTIVITIES

3.1 PROJECT VIVA



3.2 SELF LEARNING STUDENTS TO READ THE MAGAZINE

