

# **Dr. C.V. Raman University**

**Kargi Road Bilaspur (C.G.)**

**DEPARTMENT OF CHEMISTRY**

**LIST OF EXPERIMENT (M.SC.)**

## **Analytical Practical (Sem. - II)**

1. To find out total hardness of water sample by EDTA method.
2. Determination of Iron from Iron ore by redox titrimetric method (Using N-phenyl anthranilic acid).
3. To determine the conc. Of Iron ion in a given sample spectrophotometrically (by O- Phenoanthroline).
4. To determine the % of Copper in Copper ore.
5. Separation of metallic ion's by paper chromatography.
6. Estimation of available chlorine in bleaching powder.
7. Estimation of Barium as Barium Sulphate.
8. Estimation of calcium and magnesium in Dolomite.
9. Estimation of Sulphate as Barium Sulphate.
10. Separation of metallic ion's by paper chromatography.

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## **LIST OF EXPERIMENT (M.SC.)**

### **Inorganic Practical (Sem. - I)**

1. Estimation of Barium as Barium sulphate gravimetrically.
2. To determine the strength of a given copper sulphate solution with N/10 Sodium thiosulphate (Hypo).
3. Determination of copper as copper sulphate by volumetrically.
4. Determination of percentage of available chlorine in bleaching powder.
5. Analysis of mixture containing acid and basic radical .
6. Analysis of mixture containing acid and basic radical with interfering radical.
7. Analysis of mixture containing acid and basic radical .
8. Analysis of mixture containing acid and basic radical with interfering radical.
9. Analysis of mixture containing acid and basic radical .
10. Analysis of mixture containing acid and basic radical with interfering radical.

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## LIST OF EXPERIMENT (M.SC.)

### Inorganic Chemistry (SPL, SEM. - III)

1. Determination of the percentage of sulphur in the given compound (messenger method).
2. Estimation of Cu in copper ore .
3. Estimation of Ni AS Nickel dimethyl glyoximate in given solution.
4. Estimation of ZnAS Zinc Ammonium Phosphate in given solution.
5. Estimation of Ba and Pb in given solution.
6. Preparation of Tetramine cupric sulphate (II).
7. Preparation of Nickel dimethyl glyoxime
8. Preparation of Prussian Blue  $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$ .
9. Preparation of trans pottassium dioxolatodiaquocromate  $\text{k}[\text{Cr}(\text{C}_2\text{O}_4)(\text{H}_2\text{O})].2\text{H}_2\text{O}$
10. Preparation of sodium trioxalatoferratetrihydrate  $\text{Na}_3[\text{Fe}(\text{C}_2\text{O}_4)_3].3\text{H}_2\text{O}$ .
11. Preparation of Potassiumtrioxalatoalluminate .

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## **LIST OF EXPERIMENT (M.SC.)**

### **General Practical (SEM. - III)**

1. Determination of total hardness of water by complexometric method.
2. Determination of residual sodium carbonate of given sample.
3. Determination of dissolved oxygen of given sample.
4. Determination of B.O.D. in given sample.
5. Determination of C.O.D. in given sample.
6. To determine the chlorine ions of the given sample .
7. Estimation of sulphate by spectrophotometer by using turbidimetric method.
8. Determination the % of sodium, in the given sample.
9. Determination of magnesium Hazzard's in the given sample.

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## **LIST OF EXPERIMENT (M.SC.)**

### **Organic Practical (SEM. - II)**

1. To identify the element and functional group of a given sample.
2. To identify the element and functional group of a given sample.
3. To identify the element and functional group of a given sample and identify the organic compound.
4. To estimate the percentage of Phenol by preparing standard curve by spectrophotometer.
5. To prepare Benzilic acid from Benzoin.
6. To prepare anthranilic acid from phthalic anhydride.
7. To prepare phenytoin from Benzoin.
8. To prepare Benzil from Benzaldehyde.
9. To prepare Acetanilide from Benzene.
10. To prepare Benzanilide from benzene.

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## **LIST OF EXPERIMENT (M.SC.)**

### **Organic Chemistry (SPL, SEM. - II)**

1. Preparation of m- Dinitrobenzene .
2. Preparation of acetanilide from aniline.
3. Preparation of acetyl salicylic acid.
4. To prepare Di-benzal acetone.
5. Determine of the percentage of sulphur in the given organic compound .
6. Estimation of Nitrogen present in organic sample.
7. Preparation of p-bromoaniline from m – bromoacetanilide.
8. To determine the % purity of the given carbonyl compound by means of hydrozane.
9. To separate purity and prepare the derivative of given mixture of organic compound.
- 10.To isolate lactose from milk.
- 11.To isolate lycopene from tomato.
- 12.To separate and identify given amino acid's by paper chromatography.
- 13.Identification of given suger by paper croatography.

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### **Physical Practical (SEM. - I)**

1. Determination of equivalent conductance of weak electrolyte from Kohlrausch's law.
2. Determination of solubility of a sparingly soluble salt by conductance measurement.
3. Determination of equivalent conductance of infinite dilution of strong electrolyte using Debye Huckl Onsager equation .
4. To test the validity of Lambert Beer law from potassium permanganate solution and hence determine concentration of given solution of the substance.
5. To determine the partition coefficient of iodine between carbon tetra chloride and water.
6. Study the adsorption of oxalic acid from solution on activated charcoal and examine the validity of Freundlich isotherm.
7. Study of the diagram of binary liquid system phenol and water.