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# Cbse Chemistry Lab Manual 12th

**Oswaal Editorial Board**



## **Cbse Chemistry Lab Manual 12th:**

*CBSE Class 12th Chemistry (10 Most Likely Question Papers with Solution) By Career Point Kota Career Point Kota, 2020-07-28*

The CBSE has made certain changes in the assessment structure from the session 2019 20 onwards. In the new scheme of examination CCE and term system has been replaced with the Internal Assessment Single Annual Exam by CBSE itself. Single exam conducted by CBSE will carry 80 marks whereas 20 marks are left to the schools for internal assessment. CBSE has issued detailed guidelines on how the internal marks will be divided among different activities. From 2019 onwards there will be internal choices in board examinations with increased internal options in the question paper. Considering this change now a student has to prepare accordingly for board examinations. The new assessment format brought with it excitement as well as anxiety. And to help them prepare and excel in their CBSE board examination Career Point Kota has developed a series of 10 Most Likely Question Papers with Solutions. The Key Features of Most Likely Question Papers with Solutions Series: New OBJECTIVE TYPE question in each paper. Syllabus of CBSE 2019 20 Based on the latest CBSE Syllabus. Pattern Mind map of each chapter is given to visualize and help acquire a better understanding. Important terms, facts, formulae and quick revision tips are given. Covers questions asked in previous year board exams. Toppers Answer Sheet as released by CBSE to understand the scoring technique. We hope this book will gratify students' need for the new CBSE pattern board exam and smoothen their path to success. We wish to utilize the opportunity to place on record our special thanks to all the members of the Content Development team for their efforts to create this wonderful book.

CBSE History Class 12 Full Course Dr. Brajesh Kumar Srivastava, 2025-10-18

Section A Archaeology Ancient India 1 The Story of the First Cities Harappan Archaeology 2 Political and Economic History from the Mauryan to the Gupta Period 3 Social History With Special Reference to Mahabharata 4 History of Ancient Indian Religions with Special Reference to Buddhism and Sanchi Stupa Section B Medieval India 5 The Ain I Akbari Agrarian Relations 6 The Mughal Court Reconstructing History through Chronicles 7 Architecture of Hampi Vijaynagara 8 Religious History The Bhakti Sufi Tradition 9 Medieval Society through Foreign Travellers Accounts Section C Modern India 10 Colonialism and Rural Society Evidence from Official Reports 11 1857 A Review 12 Colonial Cities Urbanisation Planning and Architecture 13 Mahatma Gandhi through Contemporary Eyes and His Role in the Indian Politics 14 Partition of India and Its Study through Oral Sources 15 Making of the Indian Constitution Appendix 1 Chronology of Important Events in Indian History 2 Major Dynasties and Associated Kings of Indian History 3 Sacraments and Symbols 4 Foreign Travellers in India 5 Ancient and Medieval Texts 6 Major Wars Battles of Indian History and their Consequences 7 British Governors Governor Generals and Viceroys of India 8 Famous Slogans and Related Personalities of the Indian National Movement 9 Famous Hindi Newspapers of Modern India Year of Inception Their Founder and Place 10 Major Political Social and Nationalist Organizations of Modern India 11 India's Leading Leaders and their Titles Surnames 12 Congress Sessions President and Important Facts 13 Revolutionary Event under the Freedom

Movement Competency Focused Questions Board Examination Papers      *Comprehensive Practical Chemistry XII* Dr. N . K. Verma, B. K. Vermani, Dr. Neera Verma, K . K. Rehani, 2011-11      Oswaal CBSE Question Bank Class 12 English Core, Physics, Chemistry & Mathematics (Set of 4 Books) Chapterwise and Topicwise Solved Papers For Board Exams 2025 Oswaal Editorial Board, 2024-02-15 Description of the product 100% Updated Syllabus Fully Solved Board Papers we have got you covered with the latest and 100% updated curriculum Crisp Revision with Topic wise Revision Notes Smart Mind Maps Extensive Practice with 3000 Questions Board Marking Scheme Answers to give you 3000 chances to become a champ Concept Clarity with 1000 Concepts 50 Concept Videos for you to learn the cool way with videos and mind blowing concepts NEP 2020 Compliance with Competency Based Questions for you to be on the cutting edge of the coolest educational trends

Lab Sparks: Amazing Chemistry – Level-2 for Classes 9-12: A Student-Friendly Practical Manual | You Can See, Feel & Explore! | 35+ Advanced Experiments KUNDAN KUMAR, 2025-07-14 Ignite the Spark of Advanced Chemistry with Over 35 Electrifying Experiments That Will Blow Your Mind Welcome to Lab Sparks Amazing Chemistry Level 2 a student friendly practical manual designed for curious minds in Classes 9 12 Ages 14 18 This book transforms complex chemistry concepts into hands on real world experiments perfect for board practicals NEET JEE preparation and science enthusiasts From the dramatic Barking Dog Reaction to glowing liquids from color changing indicators to electrolysis of water every experiment is crafted to make advanced chemistry engaging safe and unforgettable What's Inside Step by step instructions with emoji based visuals Real life connections see how chemical reactions power rockets batteries and life itself Advanced Analysis Titration gas laws reaction kinetics and more Safety tips teacher notes for every activity Aligned with NCERT CBSE syllabus and NEP 2020 guidelines Perfect for project files science exhibitions and competitive exam prep Imagine Watching the Barking Dog Reaction roar with blue flames and sound Making light glow from chemicals chemiluminescence Splitting water into hydrogen and oxygen using electricity Seeing colors change like magic with acid base indicators Creating crystals that grow before your eyes This book is more than a lab manual it's a launchpad for future scientists doctors and engineers It builds critical thinking problem solving skills and a deep love for the invisible reactions that shape our world Perfect For CBSE State Board Students Class 9 12 NEET JEE Mains Aspirants Science Teachers Coaching Centers School Practical Files Science Fair Projects Gift for Young Scientists Who Love to Explore By Kundan Kumar PGT Chemistry Creator of Short Sweet Chemistry YouTube and Founder of Short Sweet Services Because Chemistry Isn't Just Formulas It's Magic in a Bottle Ready to turn ordinary ingredients into extraordinary adventures Let's get started      *Lab Sparks: Amazing Physics – Level-2 for Classes 9-12: A Student-Friendly Practical Manual | You Can See, Feel & Explore! | 30+ Visual Experiments Based on NCERT/CBSE & NEP 2020* KUNDAN KUMAR, 2025-10-13 Ignite the Spark of Advanced Physics with Over 35 Electrifying Experiments That Will Blow Your Mind Welcome to Lab Sparks Amazing Physics Level 2 a student friendly practical manual designed for curious minds in Classes 9 12 Ages 14 18 This book transforms complex physics concepts into hands on real

world experiments perfect for board practicals NEET JEE preparation and science enthusiasts From building your own electric motor to making sound waves visible from magnetic levitation to harnessing solar energy every experiment is crafted to make advanced physics engaging safe and unforgettable What's Inside Step by step instructions with emoji based visuals Real life connections see how motors generators and optics work in daily life Advanced Analysis Graphical methods mirror formula Snell's Law and more Safety tips teacher notes for every activity Aligned with NCERT CBSE syllabus and NEP 2020 guidelines Perfect for project files science exhibitions and competitive exam prep Imagine Building a homopolar motor that spins using just a battery magnet and wire Making light bend like magic with a prism and discover rainbows inside Feeling sound vibrate through air in a resonance tube Defying gravity with magnetic levitation Lighting a bulb using just a pencil lead and a 9V battery This book is more than a lab manual it's a launchpad for future engineers scientists and innovators It builds critical thinking problem solving skills and a deep love for the invisible forces that shape our world Perfect For CBSE State Board Students Class 9-12 NEET JEE Mains Aspirants Science Teachers Coaching Centers School Practical Files Science Fair Projects Gift for Young Scientists Who Love to Explore By Kundan Kumar PGT Chemistry Creator of Short Sweet Chemistry YouTube and Founder of Short Sweet Services Because Physics Isn't Just Formulas It's Energy in Motion Ready to turn ordinary ingredients into extraordinary adventures Let's get started

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The Ultimate Science Adventure Awaits Discover the Magic of Physics with Over 70 Hands On Experiments That Will Blow Your Mind Welcome to Lab Sparks Amazing Physics Complete Edition the most comprehensive and student friendly practical manual ever created for young scientists in Classes 6-12 Ages 10-18 Whether you're launching balloon rockets or building your own electric motor this book turns abstract physics concepts into real touchable experiences From kitchen science to electromagnetic wonders every experiment is designed to spark curiosity ignite wonder and make learning unforgettable What's Inside 70 Visual Experiments From fire tornadoes to magnetic levitation Step by Step Instructions with emoji based visuals diagrams Real Life Connections See how physics works in daily life Safety Tips Student Reflections after every activity Aligned with NCERT CBSE Syllabus NEP 2020 Guidelines Perfect for Practical Files Science Fairs Project Work Competitive Exam Prep NEET JEE Graded Difficulty Simple Home Experiments Class 6-8 to Advanced Lab Activities Class 9-12 Imagine Watching a fire tornado dance in a jar Making a rainbow with just a mirror and water Building a homopolar motor that spins using only a battery and magnet Feeling sound waves vibrate through the air Lighting a bulb using just a pencil lead Defying gravity with magnetic levitation This isn't just a lab manual it's a journey from Why to Wow It builds scientific thinking problem solving skills and a lifelong love for the invisible forces that shape our world Perfect For CBSE State Board Students Class 6-12 NEET JEE Mains Aspirants Science Teachers Homeschooling Parents School Practical Files Science Exhibition Projects Gift for Young

Scientists Who Love to Explore By Kundan Kumar PGT Chemistry Creator of Short Sweet Chemistry YouTube and Founder of Short Sweet Services Because Physics Isn't Just Formulas It's Energy in Motion Ready to turn ordinary ingredients into extraordinary adventures Let's get started

*Oswaal One for All Class 12 English, Physics, Chemistry & Mathematics (Set of 4 books) (For CBSE Board Exam 2024)* Oswaal Editorial Board, 2023-07-31 Description of the product Strictly as per the latest CBSE Syllabus dated March 31 2023 Cir No Acad 39 2023 Acad 45 2023 100 % Updated for 2023-24 with Latest Rationalised NCERT Textbooks Concept Clarity with Concept wise Revision Notes Mind Maps Mnemonics 100% Exam Readiness with Previous Year's Questions Board Marking Scheme Answers Valuable Exam Insights with 3000 NCERT Exemplar Questions Extensive Practice with Unit Wise Self Assessment Questions Practice Papers NEP Compliance with Competency based questions

NCERT/CBSE 12th Biology Class 12 Dr. Sunita Bhagia, Megha Bansal, 2024-09-27

- 1 Reproduction in Organisms
- 2 Sexual Reproduction in Flowering Plants
- 3 Human Reproduction
- 4 Reproductive Health
- 5 Principles of Inheritance and Variation
- 6 Molecular Basis of Inheritance
- 7 Evolution
- 8 Human Health and Diseases
- 9 Strategies for Enhancement in Food Production
- 10 Microbes in Human Welfare
- 11 Principles and Processes of Biotechnology
- 12 Biotechnology and its Applications
- 13 Organism and Populations
- 14 Ecosystem
- 15 Biodiversity and Conservation
- 16 Environmental Issues

Appendix Selected Questions Answers From Previous Years CBSE Examinations Chapterwise Objective Type Questions Board Examination Papers

*Lab Manual Chemistry Class XII -by Dr. K. N. Sharma, Dr. Subhash Chandra Rastogi, Er. Meera Goyal (SBPD Publications)* Dr. K. N. Sharma, Dr. Subhash Chandra Rastogi, Er. Meera Goyal, 2021-07-03

Highly Useful for Various Engineering and Medical Competitive Examinations

Practical/Laboratory Manual Chemistry Class XI based on NCERT guidelines by Dr. S. C. Rastogi & Er. Meera Goyal Dr. S. C. Rastogi, Er. Meera Goyal, 2020-06-23

An Excellent Book in Accordance with the latest syllabus for Class 11 Prescribed by CBSE NCERT and Adopted by Various State Education Boards

**A Basic Laboratory Techniques**

- 1 To cut a glass tube or glass rod
- 2 To bend the glass rod at an angle
- 3 To draw a glass jet from a glass tube
- 4 To bore a cork and fit a glass tube into it

**B Characterisation and Purification of Chemical Substances**

- 1 To determine the melting point of the given unknown organic compound and its identification simple laboratory technique
- 2 To determine the boiling point of a given liquid when available in small quantity simple laboratory method
- 3 To prepare crystals of pure potash alum  $K_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$  from the given impure sample
- 4 To prepare the pure crystals of copper sulphate from the given crude sample
- 5 To prepare pure crystals of benzoic acid from a given impure sample

**C Measurement of pH Values**

- 1 To determine the pH value of vegetable juices fruit juices tap water and washing soda by using universal pH paper
- 2 To determine and compare the pH values of solutions of strong acid HCl and weak acid  $CH_3COOH$  of same concentration
- 3 To study the pH change in the titration of strong base Vs strong acid by using universal indicator paper
- 4 To study the pH change by common ion  $CH_3COO^-$  ion in case of weak acid  $CH_3COOH$
- 5 To determine the change in pH value of weak base  $NH_4OH$  in presence of a common ion  $NH_4^+$

**D Chemical Equilibrium**

- 1 To study the shift in

equilibrium between ferric ions and thiocyanate ions by changing the concentrations of either of the ions 2 To study the shift in equilibrium between  $\text{Co}^{2+}$  and  $\text{Cl}^-$  ions by changing the concentrations of either of the ions E Quantitative Analysis 1 To prepare M 10 oxalic acid solution by direct weighing method 2 To prepare M 10 solution of sodium carbonate by direct weighing method 3 To determine the strength of given solution of sodium hydroxide by titrating it against N 10 or M 20 solution of oxalic acid 4 To determine the strength of a given solution of hydrochloric acid by titrating it against a standard N 10 or M 20 sodium carbonate solution F Qualitative Analysis 1 Analysis of Anions 2 Analysis of Cations G Detection of Elements in Organic Compounds 1 To detect the presence of nitrogen sulphur and halogens in a given organic compound by Lassaigne's test 2 To detect the presence of nitrogen sulphur and halogens in the given organic compound sample number by Lassaigne's test INVESTIGATORY PROJECTS A Checking of Bacterial Contamination in Water 1 To check the bacterial contamination in drinking water by testing sulphide ions B Methods of Water Purification 1 To purify water from suspended impurities by using sedimentation 2 To purify water by boiling 3 To purify water by distillation method 4 To purify water by reverse osmosis technique 5 To purify water by GAC method 6 To purify water by bleach treatment 7 To purify water by oxidising agent 8 To purify water by ozone treatment method C Water Analysis 1 To test the hardness of different water samples D Foaming Capacity of Various Soaps 1 To compare the foaming capacity of different washing soaps 2 To study the effect of addition of sodium carbonate on foaming capacity of washing soap E Tea Analysis 1 To study the acidity of different samples of tea leaves tea by using pH paper F Analysis of Fruits and Vegetable Juices 1 To analyse the fruit and vegetable juices for the constituent present in them G Rate of Evaporation 1 To study the rate of evaporation of different liquids H Effect of Acids and Bases on Tensile Strength of Fibres 1 To compare the tensile strength of natural fibres and synthetic fibres 2 To study the effect of acids and bases on tensile strength of different fibres Log Antilog Table      Lab Sparks: Amazing Chemistry - Complete Edition for Classes 6-12: The Ultimate Practical Manual | You Can See, Feel & Explore! | 70+ Experiments from Kitchen Science to Barking Dog Reaction | Aligned with NCERT, CBSE & NEP 2020 KUNDAN KUMAR, 2025-07-14 The Ultimate Science Adventure Awaits Discover the Magic of Chemistry with Over 70 Hands On Experiments That Will Blow Your Mind Welcome to Lab Sparks Amazing Chemistry Complete Edition the most comprehensive and student friendly practical manual ever created for young scientists in Classes 6 12 Ages 10 18 Whether you're making balloons inflate without blowing or witnessing the Barking Dog Reaction roar this book turns abstract chemistry concepts into real touchable experiences From kitchen science to dramatic explosions every experiment is designed to spark curiosity ignite wonder and make learning unforgettable What's Inside 70 Visual Experiments From fizzing reactions to glowing liquids Step by Step Instructions with emoji based visuals diagrams Real Life Connections See how chemistry works in daily life Safety Tips Student Reflections after every activity Aligned with NCERT CBSE Syllabus NEP 2020 Guidelines Perfect for Practical Files Science Fairs Project Work Competitive Exam Prep NEET JEE Graded Difficulty

Simple Home Experiments Class 6 8 to Advanced Lab Activities Class 9 12 Imagine Balloons that inflate using just vinegar and baking soda Liquids that change color like magic with kitchen indicators Making rainbows with a mirror and water Growing crystals at home Fire tornadoes in a jar safely observed The legendary Barking Dog Reaction that roars with blue flame This isn't just a lab manual it's a journey from Why to Wow It builds scientific thinking problem solving skills and a lifelong love for the invisible forces that shape our world Perfect For CBSE State Board Students Class 6 12 NEET JEE Mains Aspirants Science Teachers Homeschooling Parents School Practical Files Science Exhibition Projects Gift for Young Scientists Who Love to Explore By Kundan Kumar PGT Chemistry Creator of Short Sweet Chemistry YouTube and Founder of Short Sweet Services Because Chemistry Isn't Just Formulas It's Magic in a Bottle Ready to turn ordinary ingredients into extraordinary adventures Let's get started

Comprehensive Practical Chemistry (Abhilekhan) XII Dr. N.K. Verma, Avinash Ojha, 2008-05-01

10 in One Study Package for CBSE Chemistry Class 12 with 5 Model Papers 2nd Edition Disha Experts, 10 in ONE CBSE Study Package Chemistry class 12 with 5 Sample Papers 2nd Edition has 10 key ingredients that will help you achieve success

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- 2 All India Board 2017 18 Solved Paper provided separately to understand the pattern
- 3 Exhaustive theory based on the syllabus of NCERT books along with the concept maps for the bird's eye view of the chapter
- 4 NCERT Solutions All NCERT Exercise Questions fully solved
- 5 VSA SA LA Questions Sufficient Practice Questions divided into VSA SA LA type Numericals are also included wherever required
- 6 Past Years Questions Past 10 year Questions 2007 2016 of Board Exams are also included in every chapter
- 7 HOTS Exemplar Value based Questions High Order Thinking Skill Based Moral Value Based and Selective NCERT Exemplar Questions included
- 8 Chapter Test A time bound test to assess your preparation in each chapter
- 9 Important Formulae Terms and Definitions for quick revision
- 10 Full syllabus Sample Papers 5 papers with detailed solutions designed exactly on the latest pattern of CBSE Board

10 in One Study Package for CBSE Chemistry Class 12 with 5 Model Papers Disha Experts, 2017-08-29

10 in ONE CBSE Study Package Chemistry class 12 with 5 Sample Papers is another innovative initiative from Disha Publication This book provides the excellent approach to Master the subject The book has 10 key ingredients that will help you achieve success

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- 9 Important Formulae Terms and Definitions
- 10 Full syllabus Sample Papers 5 papers with detailed solutions designed exactly on the latest pattern of CBSE Board

**Practical/Laboratory Manual**



**Chemistry Class - XI** Er. Meera Goyal, 2021-05-29

**1 Basic Laboratory Techniques**

- 1 To cut a glass tube or glass rod
- 2 To bend the glass rod at an angle
- 3 To draw a glass jet from a glass tube
- 4 To bore a cork and fit a glass tube into it

Viva Voce

**2 Characterisation and Purification of Chemical Substances**

- 1 To determine the melting point of the given unknown organic compound and its identification simple laboratory technique
- Viva Voce
- 2 To determine the boiling point of a given liquid when available in small quantity simple laboratory method
- Viva Voce
- 3 To prepare crystals of pure potash alum  $K_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$  from the given impure sample
- 4 To prepare the pure crystals of copper sulphate from the given crude sample
- 5 To prepare pure crystals of benzoic acid from a given impure sample

Viva Voce

**3 Measurement of pH Values**

- 1 To determine the pH value of vegetable juices fruit juices tap water and washing soda by using universal pH paper
- 2 To determine and compare the pH values of solutions of strong acid HCl and weak acid  $CH_3COOH$  of same concentration
- 3 To study the pH change in the titration of strong base Vs strong acid by using universal indicator paper
- 4 To study the pH change by common ion  $CH_3COO^-$  ion in case of weak acid  $CH_3COOH$
- 5 To determine the change in pH value of weak base  $NH_4OH$  in presence of a common ion  $NH_4^+$

Viva Voce

**4 Chemical Equilibrium**

- 1 To study the shift in equilibrium between ferric ions and thiocyanate ions by changing the concentrations of either of the ions
- 2 To study the shift in equilibrium between  $Co(H_2O)_6^{2+}$  and  $Cl^-$  ions by changing the concentrations of either of the ions

Viva Voce

**5 Quantitative Analysis**

- 1 To prepare M 10 oxalic acid solution by direct weighing method
- 2 To prepare M 10 solution of sodium carbonate by direct weighing method
- 3 To determine the strength of given solution of sodium hydroxide by titrating it against N 10 or M 20 solution of oxalic acid
- 4 To determine the strength of a given solution of hydrochloric acid by titrating it against a standard N 10 or M 20 sodium carbonate solution

Viva Voce

**6 Qualitative Analysis**

Analysis of Anions

Analysis of Cations

Viva Voce

**7 Detection of Elements in Organic Compounds**

- 1 To detect the presence of nitrogen sulphur and halogens in a given organic compound by Lassaigne's test
- 2 To detect the presence of nitrogen sulphur and halogens in the given organic compound sample number by Lassaigne's test

Viva Voce

**INVESTIGATORY PROJECTS**

**1 Checking of Bacterial Contamination in Water**

- 1 To check the bacterial contamination in drinking water by testing sulphide ions

Viva Voce

**2 Methods of Water Purification**

- 1 To purify water from suspended impurities by using sedimentation
- 2 To purify water by boiling
- 3 To purify water by distillation method
- 4 To purify water by reverse osmosis technique
- 5 To purify water by GAC method
- 6 To purify water by bleach treatment
- 7 To purify water by oxidising agent
- 8 To purify water by ozone treatment method

Viva Voce

**3 Water Analysis**

- 1 To test the hardness of different water samples

Viva Voce

**4 Foaming Capacity of Various Soaps**

- 1 To compare the foaming capacity of different washing soaps
- 2 To study the effect of addition of sodium carbonate on foaming capacity of washing soap

Viva Voce

**5 Tea Analysis**

- 1 To study the acidity of different samples of tea leaves tea by using pH paper

Viva Voce

**6 Analysis of Fruits and Vegetable Juices**

- 1 To analysis the fruit and vegetable juices for the constituent present in them

Viva Voce

**7 Rate of Evaporation**

- 1 To study the rate of evaporation of different liquids

Viva Voce

**8 Effect of Acids and Bases on Tensile Strength of Fibres**

- 1 To compare

the tensile strength of natural fibres and synthetic fibres 2 To study the effect of acids and bases on tensile strength of different fibres Viva Voce

**Practical/Laboratory Manual Chemistry Class XII based on NCERT guidelines by Dr. S. C. Rastogi, Er. Meera Goyal** Dr. S. C. Rastogi ,Er. Meera Goyal,2020-06-22

**A Surface Chemistry** 1 To prepare colloidal solution sol of starch 2 To prepare a colloidal solution of egg albumin 3 To prepare colloidal solution of gum 4 To prepare colloidal solution of aluminium hydroxide  $Al(OH)_3$  5 To prepare colloidal solution of ferric hydroxide  $Fe(OH)_3$  6 To prepare colloidal solution of arsenious sulphide  $As_2S_3$  7 To purify a freshly prepared sol by dialysis 8 To compare the effectiveness of different common oils Castor oil cotton seed oil coconut oil kerosene oil mustard oil in forming emulsions Viva Voce

**B Chemical Kinetics** 1 To study the effect of concentration on the rate of reaction between sodium thiosulphate and hydrochloric acid 2 To study the effect of temperature on the rate of reaction between sodium thiosulphate and hydrochloric acid 3 To study the rate of reaction of iodide ions with hydrogen peroxide at different concentrations of iodide ions 4 To study the rate of reaction between potassium iodate  $KIO_3$  and sodium sulphite  $Na_2SO_3$  using starch solution as indicator Viva Voce

**C Thermochemistry** 1 Determine the enthalpy of dissolution of copper sulphate  $CuSO_4 \cdot 5H_2O$  in water at Room temperature 2 To determine the enthalpy of neutralization of the reaction between  $HCl$  and  $NaOH$  3 To determine enthalpy change during the interaction between acetone and chloroform Viva Voce

**D Electrochemistry** 1 To study the variation of cell potential in  $Zn|Zn^{2+}||Cu^{2+}|Cu$  with change in concentration of electrolytes  $CuSO_4$  or  $ZnSO_4$  at room temperature Viva Voce

**E Chromatography** 1 To separate the coloured components pigment present in the given extract of leaves and flowers by ascending paper chromatography and find their  $R_f$  values 2 To separate the coloured components present in the mixture of red and blue inks by ascending paper chromatography and find their  $R_f$  values 3 To separate  $Co^{2+}$  and  $Ni^{2+}$  ions present in the given mixture by using ascending paper chromatography and determine their  $R_f$  values Viva Voce

**F Preparation of Inorganic Compounds** 1 Preparation of double salt of ferrous ammonium sulphate Mohr's salt from ferrous sulphate and ammonium sulphate 2 To prepare a pure sample of potash alum fitkari 3 Preparation of crystals of potassium ferric oxalate or potassium trioxalato ferrate III Viva Voce

**G Preparation of Organic Compounds** 1 Preparation of iodoform from ethyl alcohol or acetone 2 Preparation of acetanilide in laboratory 3 Preparation of  $\beta$ -Naphthol aniline dye 4 To prepare a pure sample of dibenzalacetone 5 To prepare a pure sample of p-nitro acetanilide Viva Voce

**H Tests for the Functional Groups Present in Organic Compounds** Viva Voce

**I Study of Carbohydrates Fats and Proteins** 1 To study simple reactions of carbohydrate 2 To study simple reactions of fats 3 To study simple reactions of proteins 4 To investigate presence of carbohydrates fats and proteins in food stuffs Viva Voce

**J Volumetric Analysis** 1 To prepare 250 ml of  $M/10$  solution of oxalic acid 2 To prepare 250 ml of  $M/10$  solution of ferrous ammonium sulphate 3 Prepare  $M/20$  solution of oxalic acid with its help find out the molarity and strength of the given solution of potassium permanganate 4 Prepare  $M/20$  solution of Mohr's salt using this solution determine the molarity and strength of potassium permanganate solution Viva Voce

**K Qualitative Analysis** Viva Voce

INVESTIGATORY PROJECTS 1 To study the presence of oxalate ions in guava fruit at different stages of ripening 2 To study the quantity of caseine present in different samples of milk 3 Preparation of soyabean milk and its comparison with natural milk with respect to curd formation effect of temperature etc 4 To study the effect of potassium bisulphite as food preservative at various concentrations 5 To study the digestion of starch by salivary amylase and the effect of pH and temperature on it 6 To study and compare the rate of fermentation of the following materials wheat flour gram flour potato juice and carrot juice 7 To extract essential oils present in saunf aniseed ajwain corum illaichi cardomom 8 To detect the presence of adulteration in fat oil and butter 9 To investigate the presence of NO<sub>2</sub> in brinjal *Chemistry Lab Manual*

Neena Sinha, R Rangarajan, R P Manchanda, R K Gupta, Rajesh Kumar, Lab Manual **CBSE Laboratory Manual Physics Class 12th** Er. Akash Shukla, 2022-12-13 Once Owen Chamberlain said The development of Physics like the development of any science is a continuous one It is a constant effort of NCERT that it puts on its textbooks to promote clearer understanding of concepts in every student As important as theoretical study is practical study is also essential to prove theories into realities The freshly updated edition of LABORATORY MANUAL Physics for class XII has been designed as a complete package to understand all the relevant Physics experiments in a simple lucid and interactive manner Strictly based on CBSE guidelines each experiment includes theory to give deep insights into each concept formula term definition etc Viva Voce questions Precautions Activities Diagrams and Appendices are accumulated to make concepts clearer in accordance with the curriculum Along with the experiments suggested Investigatory Projects will reveal the complete adherence of CBSE curriculum This book serves as a step by step guide for conducting experiments in such a way that students will not need to refer to any other book for explanations of the concepts An all inclusive guidance book for Physics laboratory experiment Coverage of each experiment in a simple and lucid manner Detailed and Step by Step procedure for each experiment Necessary precautions to be followed for the experiment Viva Voce Questions to get an understanding on the experiment Suggested Investigatory Projects of the CBSE curriculum Clearly labeled Diagrams in each experiment Appendices related to some useful data TABLE OF CONTENT General Introduction of Practical Work How to Record an Experiment Experimental Errors Logarithms Basic Trigonometry Study of Graphs Section A Experiments Activities Section B Experiments Activities Suggested Investigatory Projects Appendices *McDougal Littell Chemistry*,

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