

---

## Class 9 Physics Practicals

---

Core Laboratory Manual of Physics for Class XI

An Advanced Course in Practical Physics

PRACTICAL COURSE IN PHYSICS

An Intermediate Course in Practical Physics

The National Science Foundation's Statewide Systemic Initiatives

Class 9 Physics MCQ PDF: Questions and Answers Download | 9th Grade Physics MCQs Book

A Level Advancing Physics for OCR B: Year 1 and AS

Practical Physics

An Intermediate Course of Practical Physics

Second Year Physics Practical Notes

Practical/Laboratory Manual Physics Class XII based on NCERT guidelines by Dr. Sunita Bhagia & Megha Bansal

Advanced Physics

Cambridge IGCSE® Physics Practical Workbook

Saraswati Physics Class 09

Practical Physics

A Level Advancing Physics for OCR B

B.Sc. Practical Physics

Practical/Laboratory Manual Physics Class - 12

A-Level Physics for AQA: Year 1 & 2 Student Book

Practical Physics for Engineers

Living Science Physics 9

Physics Expression - An Inquiry Approach for 'O' Level Science (Physics) Practical Workbook

Physics Practicals

Class 9 Physics Quiz PDF: Questions and Answers Download | 9th Grade Physics Quizzes Book

Academic Practical Science IX

Comprehensive Practical Physics XI

Practical experiments in school science lessons and science field trips

A Course in Practical Physics

Practical Physics Labs

Practical/Laboratory Manual Science Class IX based on NCERT guidelines by Dr. J. P. Goel, Dr. S. C. Rastogi, Dr. Sunita Bhagia & Er. Meera Goyal

Physics Practicals: Part-II

An Advanced Course In Practical Physics

A Course in Practical Physics

Physics Practicals: Part-III

First Year Physics Practical Notes

Physics Practicals Part-I

Organization of Physics Practicals at + 2 Level

Senior Secondary Physics Practicals

---

## SIDNEY STEPHENS

---

### Core Laboratory Manual of Physics for Class XI Krishna Prakashan Media

This edition of our successful series to support the Cambridge IGCSE Physics syllabus (0625) is fully updated for the revised syllabus for first examination from 2016. Written by an experienced teacher who is passionate about practical skills, the Cambridge IGCSE® Physics Practical Workbook makes it easier to incorporate practical work into lessons. This Workbook provides interesting and varied practical investigations for students to carry out safely, with guided exercises designed to develop the essential skills of handling data, planning investigations, analysis and evaluation. Exam-style questions for each topic offer novel scenarios for students to apply their knowledge and understanding, and to help them to prepare for their IGCSE Physics paper 5 or paper 6 examinations.

#### An Advanced Course in Practical Physics SBPD Publications

The standard of the book is maintained keeping the level of First Year B.Sc. course in terms of the steps required for performing the experiments. However the format of procedures to perform the experiment, observation tables, theory, viva-voce questionnaires etc. are provided wherever it is necessary for deep understanding. Utmost care has been taken to explain the steps for performing practicals with illustrative figures and circuit diagrams used where absolutely required.

#### PRACTICAL COURSE IN PHYSICS Firewall Media

Sections : A 1. Experiments, 2. Activities, Sections : B 1. Experiments, 2. Activities, 3. Suggested Investigatory, 4. Project Work

#### An Intermediate Course in Practical Physics Panpac Education Pte Ltd

#### B.Sc. Practical Physics

The National Science Foundation's Statewide Systemic Initiatives Oxford University Press - Children  
Physics : 1.To determine the focal length of concave mirror, 2. To find the focal length of convex lens by two pin method, 3. To find the image distance for varying object distances in case of a convex lens and drawing corresponding ray diagrams to show the nature of image formed, 4.To trace the path of the rays of light through a glass prism, 5.To trace the path of a ray of light passing through a rectangular glass slab for different angles of incidence. 6.To study the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I.7.To determine the equivalent resistance of two resistors when connected in series and parallel  
Chemistry : 8.To find the pH of the following samples by using pH paper universal indicator, 9.To studying the properties of a base (dil. NaOH Solution) and Acid (HCl) by their reaction with : (a) Litmus solution (Blue/Red), (b) Zinc metal, (c) Solid sodium carbonate, 10.To perform and observe the following reactions and to classify them into (a) Combination reaction, (b) Decomposition reaction, (c) Displacement reaction, (d) Double displacement reaction : (i) Action of water on quick lime, (ii) Action of heat on ferrous sulphate

crystals, (iii) Iron nails kept in copper sulphate solution, (iv) Reaction between sodium sulphate and barium chloride solutions. 11.To observe the action of Zn, Fe, Cu and Al on the following salt solutions : (a) ZnSO<sub>4</sub> (aq.), (b) FeSO<sub>4</sub> (aq.), (c) CuSO<sub>4</sub> (aq.), (d) Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> (aq.). Based on the above result to arrange Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity, 12.To study the following properties of acetic acid (ethanoic acid) : (i) Odour, (ii) Solubility in water, (iii) Effect on litmus, (iv) Reaction with sodium hydrogen carbonate. 13.To study the comparative cleaning capacity of a sample of soap in soft and hard water. Biology : 14.To study stomata by preparing a temporary mount of a leaf peel. 15.To show experimentally that carbon dioxide (CO<sub>2</sub>) is given out during aerobic respiration, 16. To study (A) Binary fission in Amoeba and (B) Budding in yeast with the help of prepared slides, 17.To identify the different parts of an embryo of a dicot seed (pea, gram or red kidney beans.)

#### Class 9 Physics MCQ PDF: Questions and Answers Download | 9th Grade Physics MCQs Book Goyal Brothers Prakashan

New and updated resources tailored to the 2015 Advancing Physics specification, written by curriculum experts and developed in partnership with OCR. With new accessible format and features throughout, these resources retain the ethos of Advancing Physics while providing full support for the new linear qualification. This Student Book covers the second year of content required for the new Advancing Physics A Level qualification. It develops true subject knowledge while also developing essential exam skills.

#### A Level Advancing Physics for OCR B: Year 1 and AS Cambridge University Press

SECTION : A EXPERIMENTS 1.To determine resistance per cm of a given wire by plotting a graph for potential difference versus current, 2.To find resistance of a given wire using meter bridge and hence determine the specific resistance (Resistivity) of its material, 3.To verify the laws of combination (Series/Parallel) of resistance using a meter bridge, 4.To compare the e.m.f. of two given primary cells using potentiometer, 5.To determine the internal resistance of a given primary cell (e.g. Leclanche cell) using potentiometer, 6.To determine the resistance of a galvanometer by half deflection method and to find its figure of merit. 7 A. To convert a given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same, 7.B.To convert a given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. 8.To find the frequency of AC mains with a sonometer and horse-shoe magnet. SECTION : B EXPERIMENTS 1.To find the value of v for different values of u in case of a concave mirror and to find the focal length, 2.To find the focal length of a convex lens by plotting graph between u and v or 1/u and 1/v. 3.To find the focal length of a convex mirror, using a convex lens.4.To find the focal length of a concave lens, using a convex lens. 5. To determine the angle of minimum deviation for a given prism by plotting a graph between the angle of incidence and angle of deviation, 6. To determine refractive index of a glass slab using a travelling microscope, 7.To find the refractive index of a liquid by using a convex lens and a plane mirror, 8.To draw I-V characteristics curve of a p-n junction in forward bias and reverse bias, 9.To draw the

characteristics curve of a zener diode and to determine its reverse break down voltage, 10. To study the characteristics of a common-emitter n-p-n or p-n-p transistor and to find out the values of current and voltage gains. SECTION : A ACTIVITIES 1. To measure the resistance and impedance of an inductor with or without iron core, 2. To measure resistance voltage (AC/DC), current (AC) and check continuity of given circuit using multimeter, 3. To assemble a household circuit comprising of three bulbs, three (on/off) switches, a fuse and a power source. 4. To assemble the components of a given electrical circuit. 5. To study the variation in potential drop with length of a wire for a steady current, 6. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key ammeter and voltmeter. Make the components that are not connected in proper order and correct the circuit and also the circuit diagram. SECTION : B ACTIVITIES 1. To study effect of intensity of light (by varying distance of the source) on an LDR (Light Depending Resistor), 2. To identify a diode, a LED, a transistor, an IC, a resistor and a capacitor from mixed collection of such items, 3. Use a multimeter to : (i) identify the transistor, (ii) distinguish between n-p-n and p-n-p type transistor, (iii) see the unidirectional flow of current in case of a diode and a LED, (iv) Check whether a given electronic components (e.g diode, transistor or IC) is in working order, 4. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab, 5. To observe polarisation of light using two polaroids, 6. To observe diffraction of light due to a thin slit, 7. To study the nature and size of the image formed by : (i) convex lens, (ii) concave mirror on a screen by using candle and a screen for different distance of the candle from the lens/mirror, 8. To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.

SUGGESTED INVESTIGATORY PROJECT 1. To Study Various factors on which the Internal Resistance/EMF of a cell depends, 2. To study the variations in current following in a circuit containing L.D.R. because of variation. (a) In the power of incandescent lamp used to illuminate the L.D.R. Keeping all the lamps in fixed position (b) In the Distance of a incandescent lamp (of fixed power) used to illuminate the L.D.R. 3. To find the refractive indices of (a) Water (b) Oil (Transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle, 4. To design an appropriate logic gate combination for a given truth table. 5. To investigate the relation between the ratio of : (i) Output and Input voltage (ii) Number of turns in secondary coils and primary coils of a self designed transformer. 6. To Investigate the dependence of angle of deviation on the angle of incidence, using a hollow prism filled one by one with different transparent fluids, 7. To Estimate the charge induced on each one of the two identical styrofoam balls suspended in a vertical plane by making use of Coulomb's Law, 8. To study the factors on which the self inductance of a coil depends by observing the effect of this coil, when put in series with a resistor (bulb) in a circuit fed up by an a.c. source of adjustable frequency, 9. To study the earth's magnetic field using a tangent galvanometer. APPENDIX Some Important Tables of Physical Constants Logarithmic and other Tables

#### Practical Physics Bushra Arshad

New and updated resources tailored to the 2015 Advancing Physics specification, from OCR's resource partner. With new accessible format and features throughout, these resources retain the ethos of Advancing Physics while providing full support for the new linear qualification. Accompanied by a bank of support and online resources on Kerboodle.

#### **An Intermediate Course of Practical Physics** Bushra Arshad

The Book Class 9 Physics Quiz Questions and Answers PDF Download (9th Grade Physics Quiz PDF Book): Physics Interview Questions for Teachers/Freshers & Chapter 1-9 Practice Tests (Class 9 Physics Textbook Questions to Ask in Job Interview) includes revision guide for problem solving with hundreds of solved questions. Class 9 Physics Interview Questions and Answers PDF covers basic concepts, analytical and practical assessment tests. "Class 9 Physics Quiz Questions" PDF book helps to practice test questions from exam prep notes. The e-Book Class 9 Physics job assessment tests with answers includes revision guide with verbal, quantitative, and analytical past papers, solved tests. Class 9 Physics Quiz Questions and Answers PDF Download, a book covers solved common questions and answers on chapters: Dynamics, gravitation, kinematics, matter properties, physical quantities and measurement, thermal properties of matter, transfer of heat, turning effect of forces, work and energy tests for school and college revision guide. Physics Interview Questions and Answers PDF Download, free eBook's sample covers beginner's solved questions, textbook's study notes to practice online tests. The Book Class 9 Physics Interview Questions Chapter 1-9 PDF includes high school question papers to review practice tests for exams. Class 9 Physics Practice Tests, a textbook's revision guide with chapters' tests for NEET/MCAT/SAT/ACT/GATE/PhO competitive exam. 9th Grade Physics Questions Bank Chapter 1-9 PDF book covers problem solving exam tests from physics textbook and practical eBook chapter-wise as: Chapter 1: Dynamics Questions Chapter 2: Gravitation Questions Chapter 3: Kinematics Questions Chapter 4: Matter Properties Questions Chapter 5: Physical Quantities and Measurement Questions Chapter 6: Thermal Properties of Matter Questions Chapter 7: Transfer of Heat Questions Chapter 8: Turning Effect of Forces Questions Chapter 9: Work and Energy Questions The e-Book Dynamics quiz questions PDF, chapter 1 test to download interview questions: Dynamics and friction, force inertia and momentum, force, inertia and momentum, Newton's laws of motion, friction, types of friction, and uniform circular motion. The e-Book Gravitation quiz questions PDF, chapter 2 test to download interview questions: Gravitational force, artificial satellites, g value and altitude, mass of earth, variation of g with altitude. The e-Book Kinematics quiz questions PDF, chapter 3 test to download interview questions: Analysis of motion, equations of motion, graphical analysis of motion, motion key terms, motion of free falling bodies, rest and motion, scalars and vectors, terms associated with motion, types of motion. The e-Book Matter Properties quiz questions PDF, chapter 4 test to download interview questions: Kinetic molecular model of matter, Archimedes principle, atmospheric pressure, elasticity, Hooke's law, kinetic molecular theory, liquids pressure, matter density, physics laws, density, pressure in liquids, principle of floatation, and what is pressure. The e-Book Physical Quantities and Measurement quiz questions PDF, chapter 5 test to download interview questions: Physical quantities, measuring devices, measuring instruments, basic measurement devices, introduction to physics, basic physics, international system of units, least count, significant digits, prefixes, scientific notation, and significant figures. The e-Book Thermal Properties of Matter quiz questions PDF, chapter 6 test to download interview questions: Change of thermal properties of matter, thermal expansion, state, equilibrium, evaporation, latent heat of fusion, latent heat of vaporization, specific heat capacity, temperature and heat, temperature conversion, and thermometer. The e-Book Transfer of Heat quiz questions PDF, chapter 7 test to download interview

questions: Heat, heat transfer and radiation, application and consequences of radiation, conduction, convection, radiations and applications, and thermal physics. The e-Book Turning Effect of Forces quiz questions PDF, chapter 8 test to download interview questions: Torque or moment of force, addition of forces, like and unlike parallel forces, angular momentum, center of gravity, center of mass, couple, equilibrium, general physics, principle of moments, resolution of forces, resolution of vectors, torque, and moment of force. The e-Book Work and Energy quiz questions PDF, chapter 9 test to download interview questions: Work and energy, forms of energy, inter-conversion of energy, kinetic energy, sources of energy, potential energy, power, major sources of energy, and efficiency.

#### **Second Year Physics Practical Notes** Walch Publishing

The Book Class 9 Physics Multiple Choice Questions (MCQ Quiz) with Answers PDF Download (9th Grade Physics PDF Book): MCQ Questions Chapter 1-9 & Practice Tests with Answer Key (Class 9 Physics Textbook MCQs, Notes & Question Bank) includes revision guide for problem solving with hundreds of solved MCQs. Class 9 Physics MCQ with Answers PDF book covers basic concepts, analytical and practical assessment tests. "Class 9 Physics MCQ" Book PDF helps to practice test questions from exam prep notes. The eBook Class 9 Physics MCQs with Answers PDF includes revision guide with verbal, quantitative, and analytical past papers, solved MCQs. Class 9 Physics Multiple Choice Questions and Answers (MCQs) PDF Download, an eBook covers solved quiz questions and answers on chapters: Dynamics, gravitation, kinematics, matter properties, physical quantities and measurement, thermal properties of matter, transfer of heat, turning effect of forces, work and energy tests for school and college revision guide. Class 9 Physics Quiz Questions and Answers PDF Download, free eBook's sample covers beginner's solved questions, textbook's study notes to practice online tests. The Book Grade 9 Physics MCQs Chapter 1-9 PDF includes high school question papers to review practice tests for exams. Class 9 Physics Multiple Choice Questions (MCQ) with Answers PDF digital edition eBook, a study guide with textbook chapters' tests for NEET/MCAT/SAT/ACT/GATE/IPhO competitive exam. 9th Grade Physics Practice Tests Chapter 1-9 eBook covers problem solving exam tests from physics textbook and practical eBook chapter wise as: Chapter 1: Dynamics MCQ Chapter 2: Gravitation MCQ Chapter 3: Kinematics MCQ Chapter 4: Matter Properties MCQ Chapter 5: Physical Quantities and Measurement MCQ Chapter 6: Thermal Properties of Matter MCQ Chapter 7: Transfer of Heat MCQ Chapter 8: Turning Effect of Forces MCQ Chapter 9: Work and Energy MCQ The e-Book Dynamics MCQs PDF, chapter 1 practice test to solve MCQ questions: Dynamics and friction, force inertia and momentum, force, inertia and momentum, Newton's laws of motion, friction, types of friction, and uniform circular motion. The e-Book Gravitation MCQs PDF, chapter 2 practice test to solve MCQ questions: Gravitational force, artificial satellites, g value and altitude, mass of earth, variation of g with altitude. The e-Book Kinematics MCQs PDF, chapter 3 practice test to solve MCQ questions: Analysis of motion, equations of motion, graphical analysis of motion, motion key terms, motion of free falling bodies, rest and motion, scalars and vectors, terms associated with motion, types of motion. The e-Book Matter Properties MCQs PDF, chapter 4 practice test to solve MCQ questions: Kinetic molecular model of matter, Archimedes principle, atmospheric pressure, elasticity, Hooke's law, kinetic molecular theory, liquids pressure, matter density, physics laws, density, pressure in liquids, principle of floatation, and what is pressure. The e-Book Physical Quantities and Measurement MCQs PDF, chapter 5 practice test to

solve MCQ questions: Physical quantities, measuring devices, measuring instruments, basic measurement devices, introduction to physics, basic physics, international system of units, least count, significant digits, prefixes, scientific notation, and significant figures. The e-Book Thermal Properties of Matter MCQs PDF, chapter 6 practice test to solve MCQ questions: Change of thermal properties of matter, thermal expansion, state, equilibrium, evaporation, latent heat of fusion, latent heat of vaporization, specific heat capacity, temperature and heat, temperature conversion, and thermometer. The e-Book Transfer of Heat MCQs PDF, chapter 7 practice test to solve MCQ questions: Heat, heat transfer and radiation, application and consequences of radiation, conduction, convection, radiations and applications, and thermal physics. The e-Book Turning Effect of Forces MCQs PDF, chapter 8 practice test to solve MCQ questions: Torque or moment of force, addition of forces, like and unlike parallel forces, angular momentum, center of gravity, center of mass, couple, equilibrium, general physics, principle of moments, resolution of forces, resolution of vectors, torque, and moment of force. The e-Book Work and Energy MCQs PDF, chapter 9 practice test to solve MCQ questions: Work and energy, forms of energy, inter-conversion of energy, kinetic energy, sources of energy, potential energy, power, major sources of energy, and efficiency.

*Practical/Laboratory Manual Physics Class XII based on NCERT guidelines by Dr. Sunita Bhagia & Megha Bansal* Krishna Prakashan Media

Engineering Physics has been specifically designed and written to meet the requirements of the engineering students of GTU. All the topics and sub-topics are neatly arranged for the students. A number of assignment problems, along with questions and answers, have also been provided. MCQs for the bridge course have been designed in such a way that the students can recollect every concept that they have read and apply easily during the examination. KEY FEATURES □ Detailed discussion of every topic from elementary to comprehensive level with several worked-out examples □ A section on practicals □ Solved Question Papers- Dec 2013 and June 2014 □ As per the syllabus for 2013-14

#### Advanced Physics Ratna Sagar

This book sets out to demonstrate the purpose and critical approach that should be made to all experimental work in physics. It does not describe a systematic course in practical work. The present edition retains the basic outlook of earlier editions, but modifications have been made in response to important changes in computational and experimental methods in the past decade. The text is in three parts. The first deals with the statistical treatment of data, and here the text has been extensively revised to take account of the now widespread use of electronic calculators. The second deals with experimental methods, giving details of particular experiments that demonstrate the art and craft of the experimenter. The third part deals with such essential matters as keeping efficient records, accuracy in arithmetic, and writing good, scientific English. Copyright © Libri GmbH. All rights reserved.

#### **Cambridge IGCSE® Physics Practical Workbook** SBPD Publications

Living Science for Classes 9 and 10 have been prepared on the basis of the syllabus developed by the NCERT and adopted by the CBSE and many other State Education Boards. Best of both, the traditional courses and the recent innovations in the field of basic Physics have been incorporated. The books contain a large number of worked-out examples, illustrations, illustrative questions,

numerical problems, figures, tables and graphs.

**Saraswati Physics Class 09** Cambridge University Press

The book serves the purpose of practical as well as general reading. It is divided into three distinct parts : Part I, Part II, Part III

**Practical Physics** S. Chand Publishing

Additional written evidence is contained in Volume 3, available on the Committee website at [www.parliament.uk/science](http://www.parliament.uk/science)

**A Level Advancing Physics for OCR B** Oxford University Press - Children

A text book on Physics

**B.Sc. Practical Physics** Frank Brothers

Get students into the swing of physics - without busting your budget! 45 step-by-step, real-world investigations use affordable alternatives to specialized equipment. Topics range from mass of air and bicycle acceleration to radioactive decay and retrograde motion. Complete with reproducible

student handouts, teacher notes, and quizzes.

*Practical/Laboratory Manual Physics Class - 12* Laxmi Publications

Goyal Brothers Prakashan

**A-Level Physics for AQA: Year 1 & 2 Student Book** New Saraswati House India Pvt Ltd

This unbeatable CGP Student Book covers all of the core content for both years of AQA A-Level Physics - plus the optional topics 9-12. It's brimming with in-depth, accessible notes, clear diagrams, photographs, tips and worked examples. Throughout the book there are lots of practice questions and end of section summaries with exam-style questions (answers at the back). There's detailed guidance on Maths Skills and Practical Skills, as well as indispensable advice for success in the final exams. If you'd prefer Year 1 (9781782943235) & Year 2 (9781782943280) in separate books, CGP has them too! And for more detailed coverage of the mathematical elements of A-Level Physics, try our Essential Maths Skills book (9781782944713)!

Practical Physics for Engineers Vikas Publishing House