

Chapter 1 : Complete NCERT Solutions For Class 10 Maths | Vidyakul

Science textbook NCERT Solutions of English Class The whole book is subdivided into four topics namely, Materials, The World of the Living, How Things Work, Natural Phenomena and Natural Resources or in the way of discipline we can state them in Chemistry, Biology, Physics and Environmental Science respectively.

Must focus on the following Chapter 1: Electric Charges and Fields Does the charge given to a metallic sphere depend on whether it is hollow or solid? Give reason for your answer. Electrostatic Potential and Capacitance A 12 pF capacitor is connected to a 50 v battery. How much electrostatic energy is stored in the capacitor? If another capacitor of 6 pf is connected in series with it with the same battery connected across the combination, find the charge stored and potential difference across each capacitor. Depict the equipotential surfaces due to an electric dipole. Current Electricity Derive an expression for drift velocity of electrons in a conductor. A wire whose cross sectional area is increasing linearly from its one end to the other, is connected across a battery of V volts. Which of the following quantities remain constant in the wire? Explain briefly how these rules are justified. The current is drawn from a cell of emf E and internal resistance r connected to the network of resistors each of resistance r as shown in the figure. Obtain the expression for i the current draw from the cell and ii the power consumed in the network. The potentiometer wire, AB, has a total resistance of R_0 . A voltage V is supplied to the potentiometer. Derive an expression for the voltage across R when the sliding contact is in the middle of potentiometer wire. Moving Charges and Magnetism Describe the working principle of a moving coil galvanometer. Why is it necessary to use i a radial magnetic field and ii a cylindrical soft iron core in a galvanometer? Write the expression for current sensitivity of the galvanometer. Can a galvanometer as such be used for measuring the current? Show that it behaves like a tiny magnetic dipole. Give the significance of negative sign. Electromagnetic Induction A long straight current carrying wire passed normally through the centre of circular loop. If the current through the wire increases, will there be an increase induced emf in the loop? Obtain the expression for the mutual inductance of two long co-axial solenoids S1 and S2 wound one over the other, each of length L and radii r_1 and r_2 and n_1 and n_2 number of turns per unit length, when a current I is set up in the outer solenoid S2. Derive the expression for the instantaneous value of the emf induced in the coil. A circular coil of cross-sectional area s_q . Calculate the maximum value of the current in the coil. Alternating Current Draw a labelled diagram of a step-up transformer. Obtain the ratio of secondary to primary voltage in terms of number of turns and currents in the two coils. A power transmission line feeds input power at V to a step-down transformer with its primary windings having turns. Find the number of turns in the secondary to get the power output at V. Which one leads in phase: Without making any other change, find the value of the additional capacitor C1, to be connected in parallel with the capacitor C, in order to make the power factor of the circuit unity. Electromagnetic Waves How is the speed of em-waves in vacuum determined by the electric and magnetic fields? Write the expression for the displacement current in terms of the rate of change of electric flux. Ray Optics and Optical Instruments A ray of light incident on face AB of an equilateral glass prism, shows minimum deviation of Calculate the speed of light through the prism. Find the angle of incident at face AB so that the emergent ray grazes along the face AC. Rashmi Singh broke her reading glasses. When she went to the shopkeeper to order new specs, he suggested that she should get spectacles with plastic lenses instead of glass lenses. On getting the new spectacles, she found that the new ones could not offer satisfactory explanation for this. Singh raised the same question to her daughter Anuja who explained why plastic lenses were thicker. Wave Optics Why should the objective of a telescope have large focal length and large aperture? How does one get linearly polarised light with the help of a Polaroid? A narrow beam of unpolarised light of intensity I_0 is incident on a Polaroid P1. The light transmitted by it is then incident on a second Polaroid P2 with its pass axis making angle of 60° relative to the pass axis of P1. Find the intensity of the light transmitted by P2. A monochromatic light of wavelength λ is incident normally on a single slit of width λ . Find the angular width of the central maximum obtained on the screen. Dual Nature of Radiation and Matter In the study of photoelectric effect the graph between the stopping potential V and frequency ν of the incident

radiation on two different metals P and Q is shown below: Atoms Find the wavelength of the electron orbiting in the first excited state in hydrogen atom. The mass number and atomic number of A₂ are 71 and 30 respectively. Determine the mass and atomic number of A₄ and A. Briefly explain the use of Zener diode as a dc voltage regulator with the help of a circuit diagram. Communication System Distinguish between a transducer and a repeater. Explain any two factors which justify the need for modulating a low frequency base-band signal.

Chapter 2 : NCERT Solutions For Class 12 Physics - Download Chapter Wise Free PDFs

NCERT class 10 science solutions can help you gain clarity to discriminate between the relevant and the irrelevant. It is not difficult to score full marks in a science exam if you know exactly how much to write. Science is a scoring subject and if you score well, it can surely help increase your aggregate marks.

Which of the following lenses would you prefer to use while reading small letters found in a dictionary? We wish to obtain an erect image of an object, using a concave mirror of focal length 15 cm. What should be the range of distance of the object from the mirror? What is the nature of the image? Is the image larger or smaller than the object? Draw a ray diagram to show the image formation in this case. Name the type of mirror used in the following situations. Answer a Concave Mirror: This is because concave mirrors can produce powerful parallel beam of light when the light source is placed at their principal focus. This is because of its largest field of view. One-half of a convex lens is covered with a black paper. Will this lens produce a complete image of the object? Verify your answer experimentally. Answer The convex lens will form complete image of an object, even if its one half is covered with black paper. It can be understood by the following two cases. Case I When the upper half of the lens is covered In this case, a ray of light coming from the object will be refracted by the lower half of the lens. These rays meet at the other side of the lens to form the image of the given object, as shown in the above figure. Case II When the lower half of the lens is covered In this case, a ray of light coming from the object is refracted by the upper half of the lens. An object 5 cm in length is held 25 cm away from a converging lens of focal length 10 cm. Draw the ray diagram and find the position, size and the nature of the image formed. A concave lens of focal length 15 cm forms an image 10 cm from the lens. How far is the object placed from the lens? Draw the ray diagram. This is shown in the following ray diagram. An object is placed at a distance of 10 cm from a convex mirror of focal length 15 cm. Find the position and nature of the image. The positive and value less than 1 of magnification indicates that the image formed is virtual and erect and diminished. What does this mean? Answer The positive sign means image formed by a plane mirror is virtual and erect. Since the magnification is 1 it means that the size of the image is equal to the size of the object. An object 5 cm is placed at a distance of 20 cm in front of a convex mirror of radius of curvature 30 cm. Find the position, nature and size of the image. Therefore, the image formed is virtual, erect, and smaller in size. An object of size 7. At what distance from the mirror should a screen be placed, so that a sharp focused image can be obtained? Find the size and the nature of the image. Find the focal length of a lens of power What type of lens is this? Hence, it is a concave lens. Find the focal length of the lens. Is the prescribed lens diverging or converging? Hence, it is a convex lens or a converging lens.

Chapter 3 : NCERT Solutions for Class 10 Science | AglaSem Schools

NCERT Solutions for Class 10 Science Chapter 10 Light Reflection and Refraction. Reflection of light by curved surfaces; Images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification.

As previously stated, Environment Science part is covered in the Biology syllabus. So we have total three subjects in Science subject, Physics, Chemistry and Biology. The first unit has total five chapters. The first chapter is about the chemical reactions and equations in which we will learn about the how to write chemical equations and balance them. Also, we will learn about the various types of chemical reactions. In the second chapter, we will learn about the various types of acids, bases and salts and their reactions with metals and non-metals. The third chapter will take us to the world of metals and non-metals where we will learn about their properties and reactions among them. In the fifth chapter, we will learn about the classification of elements and their evolution. The Second unit consists of four chapters that are from sixth to ninth. The sixth chapter is about the various life processes which human need for their survival. In the seventh chapter, we will talk about the parts of the human body which are engaged in control and coordination activities. The eighth chapter deals with reproduction activities in unicellular and multicellular organisms. The ninth chapter, we will learn how the offsprings look alike. The third unit is How things works which have four chapters. In the tenth chapter, we will learn about light and its phenomena reflection and refraction in a detailed manner. The twelfth chapter deals with the electricity in which we will learn electric circuit and resistance. In the thirteenth chapter, magnetic effects of electric current and its applications. The fourth unit has three chapters in it. The fourteenth chapters talk about the various sources of energy such as conventional and non-conventional sources. The fifteenth chapter is about our environment in which we will learn about the eco-systems, food chains and how human activities contribute in degrading its quality. The last chapter is about the conservation of natural resources.

Chapter 1 - Chemical Reactions and Equations The chapter has total 20 questions. The first three questions are of objective type. The question number sixth, seventh and eight is of balancing the equation types questions. Rest are short answer questions. Chapter 2 - Acids, Bases and Salts The exercises contain total fifteen questions of which first four are of objective type. In the fifth question, we have to write balanced equation of the given reactions. Remaining questions are of short answer type. Chapter 3 - Metals and Non-Metals There are total 16 questions in the chapter. First four questions are of objective type. Remaining questions are of short and long answer type. Chapter 4 - Carbon and its Compounds There are fifteen questions in the chapter. First three questions are of objective type. In the fifth question, we have to draw electron dot structures. Chapter 5 - Periodic Classification of Elements There are ten questions in the chapter. First two questions are of objective type. In the third question, we have to name the elements as per the questions asked. Rest questions are of short answer type. Chapter 6 - Life Processes There are total thirteen questions in the chapter of which first four questions are of objective type. In the question number eighth, twelfth and thirteenth, we have to differentiate between the given two topics. Chapter 7 - Control and Coordination There are total 12 questions in the chapter. In the last two questions, we have to differentiate between the given two topics. Chapter 8 - How do Organisms Reproduce? There are eleven questions in the chapter. In the seventh question, we have to draw a labelled diagram of the longitudinal section of a flower. Other questions are of short and long answer type. Chapter 9 - Heredity and Evolution There are total twelve questions. Chapter 10 - Light- Reflection and Refraction There are seventeen questions in the chapter. First five questions are of objective type. In the eighth question, we have to tell the name of the mirror used in specific situations. Rest questions are of short and long answer type. Chapter 11 - Human Eye and the Colourful World The chapter has thirteen questions of which first four are of objective types. Chapter 12 - Electricity There are eighteen questions in the chapter. Most are numerical questions and rest questions are short answer type. Chapter 13 - Magnetic Effects of Electric Current This chapter has total eighteen questions of which first five questions are of objective type. In the eleventh question, we have to draw a labelled diagram of an electric motor. Chapter 14 - Sources of Energy The question has total ten questions. In question

number four and five, we have to differentiate between the given two topics. Chapter 15 - Our Environment There are nine questions in the chapter of which first three questions are of objective type. Chapter 16 - Sustainable management of Natural Resources The chapter has seven questions. All questions are of short and long answer type.

Chapter 4 : NCERT Physics Answers Class 12th :-Chapter Wave Optics Solutions - EduRevealers

NCERT Solution for Class 10 Physics Chapter 12 - Electricity Page/Exercise Question 1 Judge the equivalent resistance when the following are connected in parallel - (a) 1 ohm and 10 6 ohm, (b) 1 ohm and 10 3 ohm and 10 6 ohm.

Looking forward to higher education or a career in science? Unfortunately, interest and hard work alone are not enough. To take further steps in life, you need a good academic record. Many bright students miss golden opportunities because of lack of guidance and are not able to perform optimally in spite of deep interest and willingness to work hard. We are here to bridge the gap by offering NCERT solutions for class 10 science so that you can understand the pattern and level of questions and answers expected from you in the class 10 board exams. When you sit for science exam, you have to attempt each and every question and there is no choice anywhere in the paper. The paper is of 90 marks which means your fate depends on it. The paper is divided into two sections A and B and you need to answer the questions from one section at one place. NCERT class 10 science solutions can help you gain clarity to discriminate between the relevant and the irrelevant. It is not difficult to score full marks in a science exam if you know exactly how much to write. Science is a scoring subject and if you score well, it can surely help increase your aggregate marks. It becomes very important to score well in science in class 10th for multiple reasons. They not only help you in getting a good school and stream of your choice in immediate future, it will also help you in all sorts of competitive exams. If you have not decided yet on the career path you will choose after school, don't? With high score in Science, you will have many more options open for you. Download science NCERT class 10 solutions of your choice from the links below and give your preparation an edge with expert guidance. Teachers at Vedantu are highly qualified from reputed institutes and have a fair amount of experience in preparing class 10 CBSE students. Wondering what to include and what to exclude in the answers? Do you need to draw a diagram? Would writing the equations get you extra marks or would you just be wasting your time? You can learn all this and more here at Vedantu. If you have any trouble understanding the science solutions, we are here to help you further. Once you are able to understand and solve NCERT solutions, you can easily tackle exemplar books, sample papers, online mock tests and of course, your final exams. You need to keep practicing and revising and fine tune your performance every day. Still have doubts or questions? If you have questions to ask, it means you are studying sincerely. We give you 1 full hour of trial class to clear your doubts. Enroll and benefit from an interactive session with one of our expert teachers to leave no stone unturned.

Chapter 5 : NCERT Solutions for Class 12 Physics in PDF form for session

NCERT Solutions for Physics class 10, - Access free NCERT Solutions for class 10 Physics on TopperLearning. All the questions has been solved by expert and explained in detail. Even if you have doubts you can ask and our expert will answer all your queries.

Chapter 6 : Chapterwise NCERT Solutions for Class 11th Physics

Board CBSE Textbook NCERT Class Class 10 Subject Science Chapter Chapter 12 Chapter Name Electricity Number of Questions Solved 41 Category NCERT Solutions NCERT Solutions for Class 10 Science Chapter 12 Electricity Electric current, potential difference and electric current, Ohms law, Resistance, Resistivity factors on which the resistance of a conductor depends; Series combination of.

Chapter 7 : Complete NCERT Solutions For Class 10 Science | Vidyakul

Free PDF download of NCERT Solutions for Class 10 Science (Physics) Chapter 12 - Electricity solved by Expert Teachers as per NCERT (CBSE) Book guidelines. All Chapter 12 - Electricity Exercise Questions with Solutions to help

you to revise complete Syllabus and Score More marks.

Chapter 8 : NCERT Solutions of Science- Class 10th « Study Rankers

NCERT Solutions, Class 10, Physics, CBSE- Electricity. Q An electric lamp of Ω , a toaster of resistance. 50Ω , and a water filter of resistance Ω ; are connected in parallel to a V source.

Chapter 9 : Class 10 maths NCERT solutions And Study material

Class 10 is the deciding class for your future. If you score good marks in Science, only then you would be able to take up science stream in class 11 else you will have to take either humanities or commerce.