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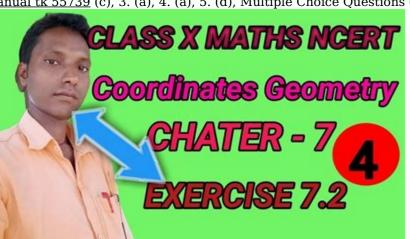
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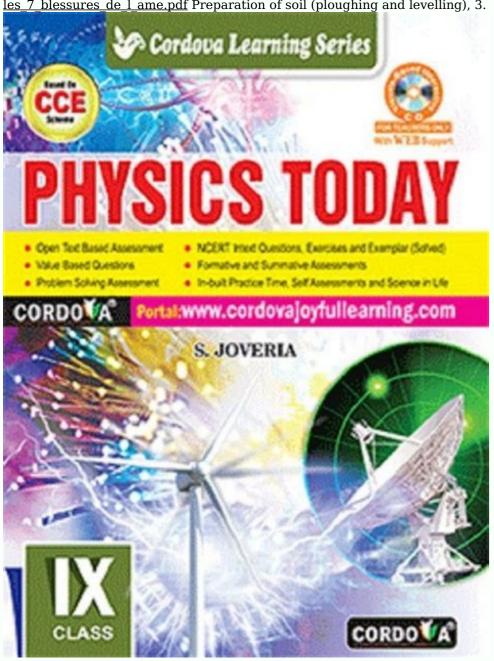


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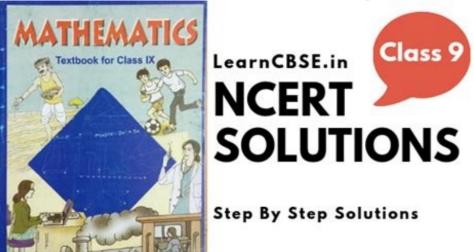
Page 1: Solutions To Text Questions, 1. Crop Production and Management, Think, Page No. 8, Rice and soya bean are kharif crops because they depend on monsoon rain for, their growth. Thus, they are not grown in winter season., Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 10, 1. (a), 2. tripac evolution diagnostic manual tk 55739 (c), 3. (a), 4. (a), 5. (d), Multiple Choice Questions (MCQs). dailymotion tv box apk Tick (3) the correct options: Page No. 15, 1. (b), 2. (c), 3. (b), 4. (b), 5.



(b), , SECTION A, CLASS RESPONSE, A. Oral questions:, 1. The use of manure or fertilisers to enhance the fertility of the soil is, called manuring., 2. The supply of water to the crop plants at regular intervals through, sources other than rain is called irrigation., 3. Rice, maize, soya bean, groundnut, cotton, B. Science quiz:, 1. Kharif crop, 2. les 7 blessures de 1 ame.pdf Preparation of soil (ploughing and levelling), 3.



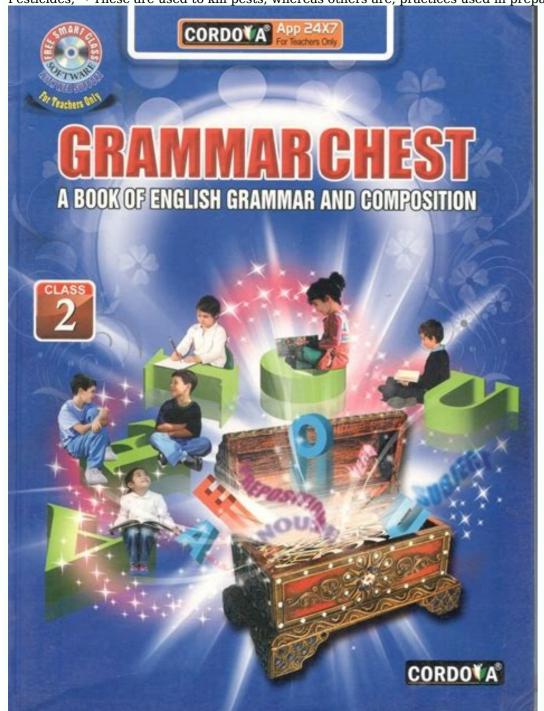
Rhizobium bacteria, WORKSHEET, A. Tick (3) the correct options:, 1. (a), 2. (b), 3. (a), 4. (c), B.



Circle the odd ones.

Give reasons for your choice:, 1. Wheat plant → It is a rabi crop, whereas others are kharif crops., 2.

Pesticides, → These are used to kill pests, whereas others are, practices used in preparation of soil., 3. Green manure → It is a manure, whereas others are fertilisers., C. Fill in the blanks:, 1. rabi crops, 2. nutoxadukarazegit.pdf wooden plank/iron leveller 3.



irrigation, , SECTION B, A., B., , 14, , Multiple Choice Questions (MCQs) Scientific/Practical skills:, 1. download monster legends hack mod apk
(c), 2. (b), 3. (b), Very Short Answer Questions:, 1. (i) Broadcasting/By traditional tool (ii) By seed drill/transplantation, 2. (i) Drip system, (ii) Sprinkler system, Teacher's Resource Pack SCIENCE-8 Page 2 : 3. 23351600750.pdf Preparation of soil → Selection and sowing of seeds → Replenishment, of nutrients in the soil → Irrigation → Crop protection → Harvesting, 4. pivigonogezapebifu.pdf Wheat, mustard, gram, pea, linseed, C. Short Answer Type-I Questions:, 1. The various tools which are needed during agricultural implements., 2. Pulses are alternated with crops like wheat and rice to replenish the soil, with nitrogen., 3. (i) nature of crop plants, (ii) nature of soil of the crop, (iii) season when the crop grows, 4. The supply of water to the crop plants at regular intervals through, sources other than rain is called irrigation, are—(i) Drips irrigation, (ii) Sprinkler irrigation, (ii) Printing and printing and printing and printing and printing are replenishment, of nutrients in the soil, with nitrogen., 3. (i) nature of crop plants, (ii) nature of crop plants, (ii) nature of crop plants, (iii) nature of crop plants, (iii) replants are regular intervals through, sources other than rain is called irrigation, are—(i) Drips irrigation, (ii) Sprinkler irrigation, (ii) Sprinkler irrigation, (ii) Printing and printing are replants and printing and printing are replants are replants are replants are replants are replants and printing are replants are replants are replants and printing are replants and printing are replants are replant

This system also saves loss of water due to evaporation, (b) Irrigation is necessary for plants because water is one of the, most vital substance that supports life. Rainfall is one of the main, sources of water for crops. Since rainfall (mosoon) is not always, dependable, it is essential that farmers should also have other, ways of expending the product of their poy, and pleasure for getting the product of their hard work and labour., , , (b) Togetherness and unity, , Teacher's Resource Pack Science, 15 Page 3: E., , 5. Page 3: E., , 5. Sandy soil needs less frequent irrigation due to its poor water-retaining, capacity, whereas clayey soil needs less frequent irrigation due to its poor water-retaining, capacity, whereas clayes soil needs less frequent irrigation due to its poor water-retaining, capacity, whereas clayes soil needs less frequent irrigation due to its poor water-retaining, capacity, whereas clayes soil needs less frequent irrigation due to its poor water-retaining, capacity, whereas clayes soil needs less frequent irrigation due to its poor water-retaining capacity, whereas clayes soil needs less frequent irrigation due to its poor water retaining, capacity, whereas clayes soil needs less frequent irrigation due to its poor water-retaining, capacity, whereas clayes soil needs less frequent irrigation due to its poor water-retaining capacity, whereas clayes soil needs less frequent irrigation due to its, good water-retaining capacity, then and animal wastes by microbes., (b) Advantages of fertilisers, (i) Fertilisers are soil by the poor water and thus, are easily absorbed, by the plants and increase the crop fields., (ii) They are nutrient-specific, thus, they provide particular, nutrients to the soil, (iii) When fertilizers are washed away due to rainfall and reach, the water bodies they cause water pollution., (ii) Preparad various crop blants, (iii) Preparad various crop plants, (iii) Pr

I would advise the use of biological methods for control of weeds because, chemical weedicides are non biodegradable and accumulate in the soil., They are harmful for the soil microorganisms., They also make the crop produce poisonous., 2.

Use of manure should always be preferred over fertilisers because unlike, fertilisers, manure is organic and biodegradable. It does not accumulate, in the soil, does not cause water or soil pollution and improves the, texture of the soil., Teacher's Resource Pack SCIENCE-8, 17 Page 5: Think And Answer, Tick (3) the correct options:, 1. (c), 2. (d), CROSSWORD PUZZLE, Across Down, 1. KHARIF, 5. IRRIGATION, 2. MANURING, 3. PLOUGHING, 4. PISCICULTURE, 2. Microorganisms: Friend and Foe, Multiple Choice Questions: Page No. 29, 1. (a), 2.

(c), 3. (b), 4. (d), 5. (b), Multiple Choice Questions (MCQs). <u>oklahoma sheet music pdf free</u> Tick (3) the correct options: Page No. 33, 1. (c), 2. (d), 3. (a), 4. (c), 5. <u>structure in c notes pdf</u> (a), , SECTION A, CLASS RESPONSE, A. Oral questions:, 1.

The toxic substances which are produced by microorganisms, make the, food poisonous and cause serious illness. This is called food poisoning., 2. Polio, influenza, common cold, dengue, chickenpox, measles, smallpox, 3. Chlorella, B. Science quiz:, 1. Bacteriophage, 2. Penicillin, Penicillium notatum, 3. Tuberculosis (common cold/pneumonia, WORKSHEET, A. Tick (3) the correct options:, 1.

Tuberculosis /common cold/ pneumonia, WORKSHEET, A. Tick (3) the correct options:, 1.

(d), 2. (a), 3. (c), 4. (b), B. Fill in the blanks:, 1. puerperio fisiologico inmediato y tardio pdf immunity, 2. nitrogenous compounds, 3. Salmonella/Staphylococci/Clostridium. 4. preservative, C. State whether the following statements are true (T) or false (F):, 1. F, 2. T, 3. T, 4. T, , SECTION B, A., , 18, , Multiple Choice Questions (MCQs) Scientific/Practical skills:, 1. (b), 2. (c), 3.

(a), Teacher's Resource Pack SCIENCE-8 Page 6: B., , C., , D., , Very Short Answer Questions:, 1. Streptomycin, tetracycline, chloromycetin, 2. Common cold, tuberculosis, pneumonia, 5. The ability of one's body to resist a disease is called immunity., Short Answer Type-I Questions:, 1.

Pasteurisation is a process for preservation of milk. In this process, milk, is heated at about 70 °C for 15 to 30 seconds to kill the bacteria from growing., 2. Viruses are different from other organisms because:, They have the characteristics of both living and non-living things. Viruses, are accellular, i.e., they do not have any of the substances present in a protein, coat. They reproduce using, the energy of the living cell. Thus, they are non-living things., 3. The process of fermentation., Short Answer Type-II Questions:, 1. Lactobacillus which promote, the formation of curd from milk., 7. Common cold, influenza, mumps, measles, chickenpox, small

pox, (b) Typhoid, Cholera, tuberculosis, anthrax, tetanus, (c) Malaria, sleeping sickness, amoebic dysentery, 4. (a) Bacteria and fungi, Teacher's Resource Pack SCIENCE-8, , 19 Page 7: (b) (i), , y walking and cycling to near distances and reducing the use, B, of fossil fuels,, (ii) By planting more and more trees, E.

Long Answer Questions:, 1.

(i) Preservation by common salt: For ages, people have preserved, fish and meat by salting. Meat and fish are covered with dry, common salt. airlift pump design calculation. Salting is also, used to preserve amla, raw mangoes, tamarind, etc., (ii) Chemical method: Food can be preserved by using certain chemical, substances which can check the growth of microorganisms. panasonic kx-tg9581 call forwarding. Such, chemical substances are called food preservatives. Most chemical, preservatives remove oxygen from the food items. This helps in, preventing microbial growth. Sodium benzoate citric acid and, potassium metabisulphite are common food preservatives.

, Advantages of food preservation are—, (i) It decreases wastage of food by avoiding spoilage., (ii) It increases the storage period., (iv) It ensures the food availability at distant places and during the off, season., 2., , , 20, , Teacher's Resource Pack SCIENCE-8 Page 8: Nitrification: Ammonium salt in the soil is converted first into nitrates by, Nitrosomonas bacteria. The nitrates are absorbed by the plants. This process is called nitrification., Denitrification. Some of the nitrates are absorbed by plants. Rest of the, nitrates in the soil are converted by Pseudomonas bacteria into nitrogen, gas which escapes into the atmosphere. The conversion of nitrates into, free nitrogen gas by denitrifying bacteria is called denitrification., 3. (a) Boiling – Heating effect, (b) Canning – Air-free packing/vaccum packing, (c) Freezing – Low temperature treatment, (d)
Dehydration – Removal of moisture, 4. (a) A small dose of dead and weakened disease-causing microbes used, to stimulate immune response in the body of a healthy person, it, acts like an antigen. The body of the person produces antibodies, against these introduced microbes. These antibodies remain in the, body and protect the person against any future infections of the, same microbe., (c) The children are vaccinated to protect them from several diseases., F. HOTS (Higher Order Thinking Skills) Questions:, 1. The curd sets faster in summers, because in summers, the weather is hot, and the bacteria that forms curd is more active in summers, 2. The person who suffers from chickenpox once, gets immunised naturally, for the disease. The antibodies formed earlier immunise the person, against any future attack by the microbe causing chickenpox., 3. We should always wash our hands before handling food items because, our hands may have germs that can infect the food items. The intake of, these infected food items may cause various diseases., G.

Practical Skill Based Questions:, To observe the increase in the volume of dough during the fermentation of, sugar present in dough by yeast cells, Things needed: Half kg flour, sugar and yeast powder, warm water, Method:, 1. Take flour (atta or maida), add two tablespoons of sugar and mix with, warm water., 2. Add a tablespoon of yeast powder and knead it to make a soft dough., 3. Put the soft dough in a container and leave it at a warm place for 2-3, hours or more., Observation: You observe that there is an increase in the volume of the, dough.

The dough rises and looks fluffy., Teacher's Resource Pack SCIENCE-8, 21 Page 9: Conclusion: Yeast breaks sugar to produce carbon dioxide gas which increases, the volume of dough., 7. (a), 2. (d), 3.

Synthetic Fibres and Plastics, Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 44, 1. (c), 2. (c), 3. (a), 4. (a), 5. (d), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 49, 1. (b), 2. (c), 3. (c), 4. (c), 5. (d), yet Carlon A, CLASS RESPONSE, A. Oral questions; plastics, B. Science quiz; plastics, B. Science quiz; plastics, B. Science quiz; plastics, B. Science quiz; plastics, C. Fill in the blanks; plastic

Refuse, Reduce, Reuse, Recycle and Recover is called the 5-R principle., It helps to reduce pollution and keep the environment clean., 3., 5., No., Parameters, Thermosetting, plastics, (ii), Nature, A plastic which once, moulded into a, particular shape does, not become soft on, on heating, heating,, (iii) Toughness,, A plastic which can, be melted repeatedly, by heating, hardened, on cooling and can be, moulded again and, again into different, shapes, , They are more tough and They are lesser tough, rigid., as compared to, thermosetting plastics, , Teacher's Resource Pack SCIENCE-8, , 23 Page 11: (iv) Effect of high They are more resistant. They are less resistant, temperatures to high temperatures, to high temperatures, to high temperatures, to high temperatures, as pacelited, Example, and and proportion of the plastic, and and are poor conductors, in the property, and the property is called drip-dry, property, (c) Abrasion-resistant: Most of the synthetic fibres are very strong and can hold, large weight without breaking, (b) Low water absorption: Synthetic fibres absorb very little amount, of water. So, they dry quickly and this property is called drip-dry, property, (c) Abrasion-resistant: Most of the synthetic fibres have wear and tear, resistance. So, the clothes made by these groups are quite lightweight. Not synthetic fibres are comparatively heavy., 2. (i) Plastics do not get completely burnt and produce toxic gases that, cause air pollution, (iii) Most of the plastics dumped in land fills, pollute land., (iv) Polybago, carelessly thrown here and there, choke the drains and, the sewer lines., (v) Plastic is dangerous for animals especially cows, the plastic is a poor, conductor of heat., (b) Burning of plastics produces toxic gases and smoke which cause air, pollution., (c) Nylon is used for making electrical switches because plastic is a poor, conductor of heat., (e) Burning of plastics produces toxic gases and smoke which cause air, pollution., (i) Nylon fibre is used for making plectric wires beave

(d), SECTION A, CLASS RESPONSE, A. Oral questions:, 1. (a) Gold, silver, copper, tin, iron, (b) Mercury, 2. Rust is basic in nature., B. Science quiz:, 1. Bismuth, tungsten, 2.

When magnesium is added to the copper sulphate solution, the bluecoloured copper sulphate solution, the bluecoloured copper sulphate solution., Teacher's Resource Pack SCIENCE-8, 2. 5 Page 13: 3. Copper, 4. Gold, WORKSHEET, A.

Tick (3) the correct options:, 1. (c), 2. (c), 3. (c), 4. (a), B. Circle the odd ones. Give reasons for your choice:, 1. Sodium → It is a poor conductor of heat., whereas others are good, conductors of heat., 3. Iodine → It is a lustrous non-metal, whereas others are hard, metals., 2. Bismuth → It is a poor conductor of heat, whereas others are good, conductors of heat., 3. Iodine → It is a lustrous non-metal, whereas others are non-lustrous, non-metals., C. Fill in the blanks:, 1. due to the blanks:, 1. (c), 2. (a), 3. (a), Very Short Answer Questions:, 1. The copper vessel on reacting slowly with carbon dioxide and water of, air loses its shine on being exposed to moist air for a long time., 2. When an iron object is left in damp air (or water) for a considerable, time, it gets covered with a reddish-brown flaky substance called rust., This is called rusting of iron., 3. Acidic oxides, Short Answer Type-I Questions:, 1. (a) Magnesium reacts with dilute hydrochloric acid to form aluminium, chloride and hydrogen gas., (b) Aluminium reacts with dilute hydrochloric acid to form aluminium, chloride and hydrogen gas., 2. Objects made of silver become black with the passage of time due to, the formation of a thin silver sulphide layer on their surface by the, action of hydrogen sulphide present in the air., 3. Arrangement of metals in a vertical column in the order of their, decreasing reactivities is called reactivity series of metals., Short Answer Type-II Questions:, 1. (a) Electric wires are made of copper because the same passage of time due to, the formation of a thin silver sulphide layer on their surface by t

Carbon and sulphur will form acidic oxides because these two are nonmetals., E. Long Answer Questions:, 1. (i) Metals are solid at room temperature, except mercury which is, liquid at room temperature, (ii) Metals are ductile, i.e., they can be drawn into thin wires., (iv) Metals are lustrous., (vi) All metals are good conductors of electricity., (vii) Metals are non-metal, and is brittle., (d) Diamond is used for making pipes because it is a non-metal, and is brittle, (d) Diamond is used for making pipes because it is a non-metal, and is brittle, (ii) Copper is malleable., (iii) Copper is ductile, (iii) Copper is a good conductor of heat and electricity., Chemical properties; (i) Copper shows displacement reaction, i.e., Fe +, CuSO4, iron, copper sulphate, copper, iron sulphate, (iii) Copper reacts with oxygen to form basic oxides., i.e., 4Cu + CQ, 2Cu2Q, copper oxygen copper oxide, (basic in nature), F., HOTS (Higher Order Thinking Skills) Questions; 1. We cannot store lemon pickle in an aluminium container because lemon, contains acid and aluminium being a highly reactive metal, reacts even, with the mild acids and forms poisonous salts., 2. Utensils made of pyrex glass can be used for heating because pyrex, glass has high melting point and is heat-resistant so it does not break on, heating. No, glass is not a metal., 3. Gallium is a metal which has a very low melting point, so as soon as it is, kept on palm it absorbs the body heat and starts melting., 4. Magnesium being a reactive metal, reacts vigorously with hot water and, forms magnesium oxide and hydrogen gas which makes it float on the, water., Mg +, H2O, ----, MgO, +, H2, magnesium, oxide, we observe tiny bubbles of hydrogen gas in the solution. On, bringing a burning matchstick near the mouth of test tube, the gas catches, fire and burns with a pop sound., Think And Answer, Tick (3) the correct options: Page No. 78, 1. (b), 2. (d), 3. (a), 4. (c), 5.

(c), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 80, 81, 1. (d), 2. (b), 3. (b), 4. (d), 5. (c), 5. (c),

distillation of coal, whereas, others are constituents of petroleum., 2. Coal tar → It is obtained from destructive distillation of coal, whereas, others are constituents of petroleum., 3. Sunlight → It is an inexhaustible natural resources., C. Fill in the blanks:, 1. destructive distillation of coal, whereas, others are constituents of petroleum., 3. Sunlight → It is an inexhaustible natural resources., C. Fill in the blanks:, 1. destructive distillation of coal, whereas, others are constituents of petroleum., 3. Sunlight → It is an inexhaustible natural resources., C. Fill in the blanks:, 1. destructive distillation of coal, whereas others are constituents of petroleum., 3. Sunlight → It is an inexhaustible natural resources., C. Fill in the blanks:, 1. destructive distillation of coal, whereas, others are constituents of petroleum., 3. Sunlight → It is an inexhaustible natural resources., C. Fill in the blanks:, 1. destructive distillation of coal, whereas others are, exhaustible natural resources., C. Fill in the blanks:, 1. destructive distillation of coal, whereas others are constituents of petroleum., 2. (a), 2. (c), 3. (d), Very Short Answer Questions:, 1. In India, coal is mainly found in Bihar, Jharkhand, West Bengal, Odisha, and Madhya Pradesh., , Teacher's Resource Pack SCIENCE-8, , 29 Page 17: 2., 3., 4., 5., C., , D., 30, , Petrol and keroseney-LPG/Diesel/fuel oil/lubricating oil/Bitumen, Krishna-Godavari delta, Petroleum., Coke is used as a reducing agent in extraction of metals from their ores., It is also used to heat furnaces in iron and steel industry., Short Answer Type-I Questions:, 1. Resources which are present in unlimited quantity in natural are, not likely to be exhausted by human activities are called inexhaustible, natural resources. For example, sunlight and air/water/rainfall/clay/, sand., 2. (a) Diesel is used as a fuel-for heavy vehicles like buses, trucks, ships., tractors, railway engines, etc., and to run water pumps to produce, electricity on small scale., (b) Bitumen is us

When coal is strongly heated in closed retorts in the absence of, air to get some useful products, the process is called destructive, distillation of coal, (b) The products obtained by the destructive distillation of coal are, coke, coal tar, ammoniacal liquor and coal gas., 2. (a) Coal is formed by carbonisation, i.e., the slow chemical process, of the conversion of the dead vegetation (remains of dead plants), into coal, under the influence of high temperature and pressure,, for million of years., (b) Methods for conservation of fossil fuels, (ii) By using renewable sources of energy like-hydroenergy, wind, and solar energy, (iii) By using fuel-efficient machines, 3. (a) CNG is preferred over petrol and diesel because it is a cleaner fuel., It produces only carbon dioxide and water.

No ash is produced on, burning of CNG.

Another great advantage of CNG is that it can be, supplied directly from the gas wells to the houses and factories, through a network of pipelines., (b) We should switch off the engines at traffic lights because this helps, in conservation of fuels. This prevents the unnecessary combustion, of fuels., 4., , 5., , S., Inexhaustible natural, Parameters, No., resources, are present resources, are present resources are present resources are present in, in unlimited quantity limited quantity limited quantity limited quantity in nature., (ii), Effects of, human, activities, Non-renewable resources, are available in, unlimited quantities, but exhausted by human activities, once used, they are likely, to be exhausted by, uncontrolled human, activities, but execuse, coal, petroleum, natural, gas, F., HOTS (Higher Order Thinking Skills) Questions; 1. Coal gas cannot be used as a cooking fuel inspite the fact that coal, gas has a high caloritic value. This is because, coal gas is produced by, destructive distillation of coal and coal is withing the convertion of the dead read plants), into the dead

millions of years to be formed., 2. Petroleum floats on water because it has less density than water, i.e., it, is lighter than water, 3. Different types of coal have different composition due to variation in, the carbon content. Carbon content varies with the extent of, carbonisation., For example, anthracite is the best variety of coal and has 90% carbon. It, is formed by compression of bituminous coal.

Peat coal has more water, and less than 60% carbon as it is the first step of coal formation. So, the, extent of carbonisation increases with increase in pressure conditions for millions of years. These conditions cannot, be provided or created in the laboratory. So, we cannot prepare coal, and petroleum in the laboratory, 5. The methods to reduce LPG consumption at home are as follows:, (a) Use pressure cooker for cooking., (b) Use efficient, smokeless chulhas at homes where kerosene, coal or, wood is used for cooking., (c) Always cook the food covered., (d) Use solar cooker, solar water heater and solar water pump, i.e.,, solar energy., (a) Combustion and Flame, Think, Page No. 91, Petrol has very low ignition temperature than kerosene, therefore it catches fire, fastly., Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 89, 90, 1. (c), 2. (a), 3. (c), 4. (c), 5. (c), 7. (c), 7.

(a), 2. (d), 3. (d), 4. (c), 5. (c), , SECTION A, CLASS RESPONSE, A. Oral questions: , 1. (a) LPG, kerosene, coal, (b) Petrol, CNG, Diesel, (c) Coal, coke, CNG, 2. From air, 3. A flame is a region where combustion or burning of a fuel (in its gaseous, form) takes place to produce heat and light., 4. Suspended Particulate Matter, B. Science quiz:, 1. Carbon monoxide (CO), 2. Petrol, 3. Ignition temperature, 4. Carboxyhaemoglobin, WORKSHEET, A. Tick (3) the correct options:, 1. (d), 2. (c), 3. (b), 4. (d), B. Circle the odd ones. Give reasons for your choice:, 1. Coal, \rightarrow It is a solid fuel, whereas others are liquid fuels., 2. Oxygen \rightarrow It helps in combustion and respiration, whereas others, are air pollutants., 3. Glass, \rightarrow It is not a combustible substance, whereas others are, combustible substances, C. Fill in the blanks:, 1. Global warming, 2. acid rain, 3. outermost, 4. Saponin, , SECTION B, A., B., , Multiple Choice Questions (MCQs) Scientific/Practical skills:, 1. (b), 2. (b), 3. (a), Very Short Answer Questions:, 1. Calorific value, 2. Wood and coal/coke/charcoal/paraffin wax, 3. The heating up of the earth's atmosphere due to the trapping up of Sun, rays or infrared radiations by greenhouse gases, like carbon dioxide in, the atmosphere, causes greenhouse effect., , Teacher's Resource Pack SCIENCE-8, , 33 Page 21: C., , Short Answer Type-I Questions:, 1. Substances which can burn easily in air to produce heat and light are, called combustion. Burning of magnesium and charcoal are

supplied to the paper cup is transferred to water by conduction.

The, water takes away the heat and does not allow the paper cup to reach its, ignition temperature. Hence, the paper cup does not burn., 5. Incomplete combustion produces carbon monoxide which is a very, poisonous gas. Carbon monoxide forms carboxyhaemoglobin when it, combines with haemoglobin of our blood. This decreases the oxygencarrying capacity of the blood. This causes suffocation and in extreme, conditions leads to death. Thus, incomplete combustion is harmful to, human beings., D.

examples of, combustion, since, both give heat and light on burning., 3. When a combustible substance burns on its own without the help of, any external heat, it is called spontaneous combustion., Examples: fire in coal mines, forest fires, burning of white phosphorus., 4. Water can be boiled in a paper cup without burning it because the heat,

there is not, enough air for complete combustion of wax vapour. The incomplete, burning of wax vapour produces carbon particles and CO. The unburnt, and continues to burn. Thus, we cannot extinguishing fire in electrical appliances because due to put off fire caused by burning of petrol because, water being heavier than petrol, burnt, suburnt, and continues to burn. Thus, we cannot extinguishing fire in electrical appliances because, it is a good conductor of electricity. When water is poured over burning, electrical appliances because, it is a good conductor of electricity. When water is poured over burning, electrical appliances because, it is a good conductor of electricity. When water is poured over burning, electrical appliances are formed in the form, of sample fire in electrical appliances because, it is a good conductor of electricity. When water is poured over burning, of sample fire in electrical appliances are formed in the form, of sample fire in electrica

wax vapour, Emits blue, flame. Wax, vapour burns, completely., 3. Combustible substances are-cloth, wooden stick, dry, leaves, paper, etc., (b) Non-combustible substances are iron nail, glass,, stone piece, steel spoon, etc., 4. (a) Fuels are classified as follows:, (i) Solid fuels, (ii) Liquid fuels, (iii) Gaseous fuels, (b) The increase in the concentration of carbon dioxide in the, atmosphere increases the rate of greenhouse effect. This leads to, increase in the average temperature of the earth. This leads to a, condition called global warming., F. HOTS (Higher Order Thinking Skills) Questions:, 1. Water cannot be used to put off fire in petrol pumps because petrol, being lighter than water will float on the surface of water and due to, the

Short Answer Type-II Questions:, 1. Characteristics of an ideal fuel:, , (i) It should burn smoothly., (ii) It should be cheap and easily available., (ii) It should burn smoothly., (iii) It should burn smoothly., (iii) It should burn smoothly., (iii) It should be easy to handle, safe to transport and convenient to, store., (vi) It should have high calorific value., 2. The three conditions necessary for burning of a substance are—, (i) presence of a combustible substance, 3. The middle zone of a candle flame is luminous because

supply of oxygen, will continue burning. Available arrangements for, extinguishing fire at petrol pumps are sand bags and fire extinguishers., 2. Bursting of crackers causes burning of phosphorus, sulphur and, magnesium. These substances when burn, produce, (i) harmful gases causing air pollution., (ii) certain oxides which combine with water present in air, forming, acids in the atmosphere, causing acid rain., G. Practical Skill Based Questions; (a) Dry leaves, (b) A piece of paper, Dry leaves and a piece of paper have low ignition temperature because, there is no moisture content in them, whereas the other two things, i.e., green leaves and a piece of wood have moisture content which increases, their ignition temperature., Think And Answer, Tick (3) the correct options; 1. (b), 2. (c), 36, , Teacher's Resource Pack SCIENCE-8 Page 24 : 7. Conservation of Plants and Animals, Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 106, 1. (d), 2. (b), 3. (a), 4. (c), 5. (b), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 109, 1. (d), 2. (a), 3. (d), 4. (c), 5. (c), , SECTION A, CLASS RESPONSE, A. Oral questions:, 1. The diverse variety of plants and animals, along with the microorganisms, living in a particular region is called biodiversity., 2. In a wildlife sanctuary, any human activity that disturbs the wild animals of the animals, 3. The International Union for Conservation Union (WCU), B. Science quiz:, 1. Satpura forest reserve, 2. Conservation Union (WCU), B. Science quiz:, 1. Satpura forest reserve, 2. Conservation, 3. IUCN (now WCQs). Scientific/Practical skills:, 1. (d), 2. (a), 3. (a), Very Short

Eucalyptus, water hyacinth, 2. Dinosaurs are extinct., 3. Deforestation, , Teacher's Resource Pack SCIENCE-8, , 37 Page 25: C., , Short Answer Type-I Questions:, 1.

Deforestation increases the level of carbon dioxide in the air and, disturbs the natural balance of gases in the atmosphere. Increased, concentration of CO2 may lead to global warming which disturbs the, water cycle and reduces rainfall, causes drought and leads to melting of, glaciers., 2. The species listed in the Red list are under the categories of extinct,, critically endangered, vulnerable, endangered, extinct in the wild, near, threatened, least concern, data deficient and not evaluated., 3. A species refers to a group of organism (plants or animals) that have, common characteristics and can interbreed themselves., 4. Planting a large number of trees on a deforested area is called, reforestation., 5. In a wildlife sanctuary, protection and suitable living conditions are, provided to the animals in their natural habitat. Animals live freely in, their natural habitats, whereas in a zoo, natural environment is not, given to the animals and they are kept in cages., D. Short Answer Type-II Questions:, 1. Animals are hunted for their skin, fur, tusks, claws, meat and other body, parts. There is a great demand for rhino horns, tiger bones, elephant, tusks and fur of several animals., 2. National park is a large area that is protected and maintained by the, government to preserve wildlife where activities like grazing and, cultivation of crops are not allowed. Only tourism is permitted. The, popular national parks of India are—, (i) Jim Corbett National Park, (ii) Kaziranga National Park, (iv) Kanha National Park, (iv

the status of various species., (ii) It tries to create awareness about the endangered species., 4. Deforestation has taken place due to the following reasons:, • To build homes, factories, roads and dams for the increasing, human population, • To obtain wood as fuel and for making furniture and paper, • To obtain more agricultural land for cultivation of crops for the, growing population, • For mining of minerals such as coal, petroleum and ores, , 38, , Teacher's Resource Pack SCIENCE-8 Page 26: E., , 5. Seasonal movement of birds and other animals in large numbers from, one place to another to overcome unfavourable conditions and returning, back to their original habitats when conditions become favourable is, called migration. Arctic tern and Siberian Crane are migratory birds., (a) Animals are hunted for trading their skin, fur, tusks, claws, meat,, horns and other body parts., (b) Due to illegal hunting, many animals in the world are under threat, and on the verge of extinction., (c) Presence of mind, concern and care for animals and

our, environment., Long Answer Questions:, 1. A multi-purpose protected area which is developed to conserve, biodiversity and also to educate, train and create awareness about, environmental aspects and eco-friendly living is called a biosphere, reserve.

The three main biosphere reserves in India are—, (i) Nanda Devi Biosphere Reserve, (ii) Gulf of Mannar Biosphere Reserve, (ii) Sunderban Biosphere Reserve, (iii) Sunderban Biospher

(d), 2. (d), 3. (a), , 8. Cell—Structure and Functions, Think, Page No. 120, If nucleus is not present in the cell, the cell and other cell organelles., Multiple Choice Questions (MCQs). Tick (3) the correct options: , Page No. 117, 118, 1. (d), 2. (c), 3. (b), 4. (c), 5. (b), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 122, 1. (c), 2. (d), 3. (c), 4. (a), 5. (a), 5. (b), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 122, 1. (c), 2. (d), 3. (c), 4. (a), 5. (a), 5. (a), 5. (b), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 127, 118, 1. (d), 2. (e), 3. (e), 4. (e), 5. (e), 5. (e), 6. (e), 6

(a), 2. (a), 3. (b), 4. (d), B.
Fill in the blanks:, 1. Robert Hooke, 2. organ, 3. cell membrane, 4. prokaryotes, , 40, , Teacher's Resource Pack SCIENCE-8 Page 28 : C., , Match the following:, 1. (d), 2. (a), , 3. (b), , 4. (c), , SECTION B, A., B., , C., , D., , Multiple Choice Questions (MCQs) Scientific/Practical skills:, 1.

(c), 2, (c), 3, (b). Yery Short Answer Questions; 1. Microscope, 2. Micron or micrometre (µm), 3, (e) Red Blood Cells (7 µm), (b) Nerve cells (100 cm), Short Answer Type-I Questions; 1. Staining is a method to colour the colour the

It, ensures the continuity of life on the earth., 3.

Sexual and asexual, B. Science quiz:, 1. Asexual reproduction, 2. In vitro fertilisation, 3. During implantation, the embryo gets embedded in the inner lining of, the uterus., Teacher's Resource Pack SCIENCE-8, 43 Page 31: WORKSHEET, A. Tick (3) the correct options:, 1. (d), 2. (d), 3. (c), 4. (b), 5. (c), B. Circle the odd ones. Give reasons for your choice:, 1. Mammals,

These are viviparous, whereas others are oviparous, animals., 2.

Fallopian tube → It is a part of female reproductive system, whereas, others are parts of female reproductive system., C. Fill in the blanks:, 1. asexual, 2. ova, 3. external, 4. foetus, D

S.No., Sexual reproduction, Asexual reproduction, (i), It produces new animals from, the existing two parents by the, fusion of their gametes., (ii), Formation of zygote takes place. No zygote is formed. Eg. Fishes, frogs, cows, dogs, Eg. Amoeba, hydra, yeast, horses, human beings, Euglena, paramectum, Teacher's Resource Pack SCIENCE-8 Page 32: D., Short Answer Type-II Questions., 1. Fallopian tube (oviduct) is a thin and colled muscular tube with a, funnel-shaped opening near ovaries. It, joins the utereus to the ovary. The, fertilisation of egg (or ovum) by the sperm takes place in the fallopian, tube, Testes, a fundamental point of the parent organism splits or divides to form two new, organisms of the same kind. In binary fission of a fully grown Amoeba, the nucleus lengthens first and divides into two parts. After that, the, cytoplasm divides into two parts around each nucleus and forms two, daughter cells, a single parent Amoeba divides to form, daughter and divides good, education. There are many children in the world who need love, and care. By giving these children whatever they need, we can set, an excan set, and the set of the se

Tick (3) the correct options: Page No. 142, 1. (c), 2. (d), 3. (d), 4. (c), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 146, 1. (c), 2. (c), 3. (b), 4. (a), 5. (a), 6. (a), 6. (a), 5. (a), 6. (a), 6. (a), 6. (a), 6. (a), 6. (a), 6. (a), 7. (a), 6. (a), 7. (a), 6. (a), 7. (a), 7.

(a) Rohan is probably experiencing the following changes:, • He has started giving more importance to his friends, his peer, group and less importance to his parents/guardians., • He often feels confused, has emotional outbursts, feels sad, or, has strong emotions or moods that change quickly., • He has become more independent and self-conscious., • He has started feeling the need for acceptance and, understanding., • He is frequently found to be confused between what is 'right', and what is 'wrong', • He feels attracted towards the opposite sex., (b) We learn to be honest, sharing and convey what we feel song and understanding., • He feels attracted towards the opposite sex., (b) We learn to be caring, friendly and supportive from Rohan's father., (b) the confused, we learn to be caring, friendly and supportive from Rohan's father., (b) the confused is when, they need us. We should provide them a strong emotions or moods that change quickly., • He has become more independent and self-conscious., • He has started feeling the need for acceptance and, understanding., • He is frequently found to be confused between what is 'right', and what is 'wrong', • He feels attracted towards the opposite sex., (b) We learn to be honest, sharing and convey what we feel sonfused the changes in the honest sharing the changes in the positive started for the positive started feeling the need for acceptance and, understanding., • He feels attracted towards the opposite sex., (b) We learn to be honest, sharing and convey what we feel confused the changes in the positive started feeling the honest sharing the positive started for the should not product the early support to feel such a division of the positive started for the positive started feeling the honest started

An egg always contains, X chromosome, whereas a sperm may contain either X or Y chromosome., • If a sperm having X chromosome fertilises the egg, the zygote, would have one X and one Y chromosome. It develops into a male, child., , , 3. (a) Pituitary gland—It is located at the base of the brain. It controls, the overall development of, muscles and bones., (b) Thyroid gland—It is located in the neck region below the larynx. It, stimulates the rate of cellular oxidation of carbohydrates, proteins, and fats., (c) Pancreas—It is located below the stomach. The hormones secreted, from pancreas maintain the blood sugar level., (d) Adrenal gland—It is located on the top of each kidney. It controls, end and evelopment of an individual depends on, , (a) certain hormones, and, (b) proper nutrition., , Probably, there has been an insufficient amount of proteins in his/her, diet and secretion of the growth hormones., 2. Adolescents are advised to take Questions (MCQs). Tick (3) the correct options:, 1. (d), 2. (b), 3. (b), , 11. Force and Pressure, Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 155, 1. (d), 2. (c), 3. (c), 4. (a), 5. (

(c), 4. (c), 5. (b), , SECTION A, CLASS RESPONSE, A. Oral questions:, 1. The five effects of force are:, (i) It can change the direction of motion of a moving object., (ii) It can change the speed of a moving object., (v) It can change the shape and size of an object., 2. The force acting along two surfaces in contact which opposes the, motion of one object over the other is called the force of friction or, frictional force., Examples of friction or, fricti

(c), B. Very Short Answer Questions:, 1. The resultant force will be the sum of both the forces., 2.

N/m2 or pascal, 3. The small pieces of paper get attracted to the plastic comb and stick to, it because of the electrostatic force., C. Short Answer Type-I Questions:, 1.

We can feel force of 1 N by placing 100 g weight on our palm., 2. An apple dropped from a height always falls on the earth because of the, force of gravity. This force is due

oxide, , CO2, , carbon dioxide, , 2P2O5, , phosphorus pentaoxide, , SO2, , sulphur dioxide, , 4.

Choice Questions (MCQs). Tick (3) the correct options: Page No. 96, 1.

paper and hence, prevents the cutting down of trees., Think And Answer, Tick (3) the correct options:, 1.

Reaching the Age of Adolescence, Multiple Choice Questions (MCQs).

Answer Ouestions: 1.

(a) Sonority, , (b) Care and concern for the poor and needy; spreading happiness and, love with simple gestures., 5. Chlorine, 6.

We can feel force of 1 N by placing 100 g weight on our palm., 2. An apple dropped from a height always falls on the earth because of the, force of gravity. This force is due to the attraction between the earth, and the objects. 3. The force of attraction exerted by the earth on the objects due to which, the objects fall vertically downwards is called force of gravity., 4. Since, there is no atmosphere outside the earth, so to maintain the, normal atmospheric pressure of their body, astronauts wear specially, designed spacesuits., 5. The pressure of a liquid increases with depth., D. Short Answer Type-II Questions:, 1. A wide steel belt is provided over the wheels of army tanks so as to, reduce pressure on the ground, otherwise the heavy wheels of tanks, may sink in the ground., 2. (a) The mountaineers suffer nose bleeding at high altitudes, the atmospheric pressure.

Due to this, some of the blood capillaries burst and, blood complete the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the fruit juice is equal to the straw is reduced. But the pressure of the

So, the greater atmospheric pressure acting on the, surface of the fruit juice up into the straw, 3. (a) As the cutting edge is sharpened, the area of contact reduces which, increases the pressure over any object and hence, knife cuts the, objects easily., (b) We learn to love, take care and to help our elders, especially, grandparents., 52, Teacher's Resource Pack SCIENCE-8 Page 40: E., Long Answer Questions:, 1. (a) A heavy truck is fitted with six to fourteen tyres because these tyres, increase the area of contact on which their weight acts and hence, reduce their pressure on the ground., (b) Skiers use long, flat skies to slide over snow because the area of, contact is larger and therefore, lesser is the pressure on the snow., (c) Foundations of high-rise buildings are kept wide, so that they exert, less pressure on the shoulder of the shoulders and making it more, comfortable to carry the heavy school bag., (b) The walls of a dam are made thicker at the bottom because water, pressure increases with depth and a

thicker wall can withstand a, greater pressure exerted by the water at greater depths., 3. (a) The pressure exerted by the air due to its own weight is known as, atmospheric pressure., (b) Our body is not crushed by the large pressure exerted by the air due to its own weight is known as, atmospheric pressure. body, balances the atmospheric, pressure., (c) Working of a syringe is based on the pressure in side the syringe and thus, it pushes the liquid up into the, syringe., F. HOTS (Higher Order Thinking Skills) Questions:, 1. Iron rails of railway tracks are fixed over wide wooden or concrete, sleepers to distribute the load (force) of train over a large area of the, ground., 2. The weight of a person on Jupiter is three times more than that on the, Earth because Jupiter has three times more gravity than that on the, Earth, 3. The water comes out slowly from an upstair's tap than from a similar, tap downwards because the liquid pressure increases with the depth, and so it flows faster in taps placed down., Teacher's Resource Pack SCIENCE-8, , 53 Page 41: G., , Numericals:, 1. Resultant force is calculated by adding the force, therefore, resultant force is the, sum of both the forces., 2. Force exerted by team A = (80 + 100 + 120) N = 300 N, Force exerted by team B = (85 + 105 + 125) N = 315 N, . .: Resultant force = Force exerted by team B - Force exerted by team B - Force exerted by team B is the winner., 3. Area of contact = 10 m2, Force exerted by team B is the winner., 3. Area of contact = 10 m2, Force exerted by team B is the winner., 3. Area of contact = 10 m2, Force exerted by team B is the winner., 3. Area of contact = 10 m2, Force exerted by team B is the winner. exerted by solid object on wooden plank, =, Area of contact, , 250, , \therefore =, = 25 Pa, 10, 4. Force exerted by the brick on the ground, Force, , Pressure =, Area, , \therefore Pressure exerted by the brick on the ground, Force exerted by the brick on the ground, =, Area of the brick, 500, $_{1}$, = 16 × 1000 = 16000 = 500 N / m2 or Pa, 32, 32, 5. Given, $_{1}$, $_{2}$, Force, Area, $_{3}$, $_{4}$, Force, Area, 120, $_{5}$, $_{5}$, $_{5}$, Force, Area, 120, $_{5}$, $_{5$ the rocket towards the ground, and the force of friction due to earth's, atmosphere, which opposes its motion., 2. Some pulses got stuck into the polythene and did not fall because of the, electrostatic force developed between the two surfaces., I. Practical Skill Based Question:, To show that the pressure increases with depth, Things needed: A plastic bottle, water and an adhesive tape, Method:, 1. Take an empty plastic, least depth., bottle (1 litre). Make, A, increasing, least pressure, tape over all holes., Pressure increases with depth., 2. Now, fill the bottle with, water. Remove the adhesive tape figures.,, Observation: You observe that on removing the tape, the water from the hole B goes a little farther away whereas the, water from the lowermost hole C travels the maximum distance.,, Discussion: The depth of water near hole A is the least, so the water comes, out from hole A with less pressure and falls near the base of the, plastic bottle. The depth of water near hole C is the greatest. So, the water, comes out with the greatest pressure and goes farthest from the container, (plastic bottle)., Conclusion: The pressure of a liquid increases with depth., 12. Friction, Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 174, 1. (d), 2. (c), 3. (d), 4. (a), 5. (d), questions:, 1. The force acting along the two surfaces in contact which opposes the, motion of one object over the other is called friction., 2. When an object is pulled over another, tiny hills and valleys present, on both the surfaces in contact get entangled with one another. The, Teacher's Resource Pack SCIENCE-8, , 55 Page 43: interlocking of the two surfaces opposes the motion of one object over, another and gives rise to friction., 2. Athletes wear spiked shoes to increase friction. because spiked shoes, have better grip on the ground and prevent slipping., 3. It is difficult to walk on wet marble is very less as compared to friction on dry marble., WORKSHEET, A. Tick (3) the correct options:, 1. (a), 2. (c), 3. (c), 4. (d), B. Circle the odd ones. Give reasons for your choice:, 1. Making grooves \rightarrow This is to increase friction, whereas others are, types of friction., 2. Rolling friction \rightarrow It is a type of kinetic friction, whereas others are, types of friction., 2. Rolling friction \rightarrow It is a type of kinetic friction, whereas others are, types of friction., 2. Rolling friction. less, 2. increase, 3. friction, 4. streamlined, , SECTION B, A., B., , C., , 56, , Multiple Choice Questions:, 1. (i) Nature of surfaces in contact with each other, (ii) Weight of the object, 2. When a wooden block is moved over the surface of a table, it slides. The, opposing force acting here is sliding friction., 3. When a wheel or circular disc rolls on a flat surface, the opposing force, acting here is rolling friction., Short Answer Type-I Questions:, 1. The special shape of a body or an object around which a fluid (liquid or, air) can flow, offering minimum amount of friction is called streamlined, shape., Teacher's Resource Pack SCIENCE-8 Page 44: 2. The substances which reduce friction are called lubricants., For example, oil, grease, D. Short Answer Type-II Questions:, 1. The different ways of increasing friction are –, (i) By making the surfaces rough: head of a matchstick and the sides of a matchstick lights up easily., (ii) By making grooves: We can increase the friction in case of tyres, of bicycles, cars, buses, etc., by making grooves in them. Due, to greater friction, the tyres get a better grip on the road which, prevents skidding of the vehicles., 2. Rolling friction is less than sliding friction because the area of contact, of the surfaces is reduced when we use round objects (e.g., wheels,, ball bearings, roller bearings, etc.). In case of sliding friction, the area, of contact is greater and offers

need of a matchstick and the sides of a matchbox, are deliberately made rough to increase the friction to produce, more heat because of which the matchstick lights up easily, (ii) By making grooves in them.

Due, to greater friction, the tyres get a better grip on the road which, prevents skidding of the vehicles, 2. Rolling friction is less than sliding friction because the area of contact, of the surfaces is reduced when we use round objects (e.g., wheels,, ball bearings, roller bearings, rol

few minutes., 8.

Gymnasts apply a coarse substance on their hands to increase the, friction between the surface and the hands so that they have a better, grip and do not slip down., Application so the triction when the friction when the trolley is loaded. This is because force, of friction, Think And Answer, Tick (3) the correct options:, 1. (b), 2. (c), 13. Sound, Think, Page No. 191, To produce a shrill sound, Suraj should tighten the strings of the guitar., Multiple Choice Questions (MCQs).

Tick (3) the correct options: Page No. 189, 1.

(c), 2. (c), 3. (b), 4. (d), 5. (c), 4. (b), 5. (c), 5. (c), 7. (c), 7

Answer, Tick (3) the correct options:, 1. (d), 2. (a), , 14. Chemical Effects of Electric Current, Multiple Choice Questions (MCQs). Tick (3) the correct options:, Page No. 200, 201, 1. (c), 2. (b), 3.

Sound is a form of energy which produces a sensation of hearing in our, ears., 2. (a) In solids, (b) In gases, 3. Hammer, anvil and stirrup, B.

Science quiz., 1. 20 Hz – 20,000 Hz, 2. Voice box or larynx, 3. Loudness of sound depends upon the amplitude of vibrations., 4. Inaudible sounds having frequency less than 20 Hz are known as, infrasonic vibrations., WORKSHEET, A. Tick (3) the correct options:, 1. (c), 2. (a), 3. (a), 4. (a), B. Circle the odd ones. Give reasons for your choice:, 1. 40 dB, or It is the loudness level of normal conversation, whereas others are the loudness levels of loud sounds, which cause noise pollution., 3. Flute, or This is a wind instrument, whereas others are stringed, instruments., Teacher's Resource Pack SCIENCE-8, 59 Page 47: SECTION B, A., Multiple Choice Questions (MCQs) Scientific/Practical skills:, 1. (c), 2. (c), 3. (a), B. Very Short Answer Questions:, 1. Flute, shehnlain, trumpet, 2. Amplitude is the maximum displacement of the bof from either side., 3. The number of oscillations made by a simple pendulum per second is, called frequency of the pendulum., C. Short Answer Type-I Questions:, 1. Wind instruments are generally made in the form of pipes. When we, blow air into them, the column of air inside vibrations from the three bones of, middle ear and converts them into nerve impulses and sends to the, brain through auditory nerves., 4. Dolphins and bats can hear the sounds that we cannot hear., 5. (a) By stretching the sheet spread on tabla surface, (b) By varying the lengths of strings of violin, (c) By closing the holes of the flute, 6. The owners of dogs use Galton's whistles to give signals to their dogs., D. Short Answer Type-II Questions:, 1. Inaudible sounds having frequency more than 20,000 Hz are known as, ultrasonic

sounds. Animals like porpoises, dolphins and bats produce, ultrasonic sounds., 2.

The pendulum makes 20 oscillations in 4 seconds., , ... The pendulum makes oscillations in one second = 5 oscillations, , ... The frequency of pendulum = 5 Hz, 3., , 60, , Teacher's Resource Pack SCIENCE-8 Page 48 : E., , 4. It is not the correct way of celebration because bursting crackers causes, air pollution and playing loud music causes noise pollution, which, is not good for our health. It disturbs the other people living in the, neighborhood, especially the infants, old and the sick people., Long Answer Questions:, 1.

(a) The characteristics of sound are (i) pitch (ii) loudness and (iii) quality., (i) Pitch : Pitch is the characteristic of sound by which, a loud sound can be distinguished from a

(a) The characteristics of sound are (i) pitch (ii) loudness and (iii) quality., (i) Pitch : Pitch is the characteristic of sound by which, a loud sound can be distinguished from a faint sound even, though both have the same pitch., (iii) Quality. Quality : Quality of the sound is the characteristic of sound by the same pitch and, loudness round, (ii) The pitch of the sound produced by an object vibrating with a, high frequency is low and the sound is called a grave sound. (ii) The pitch of the sound produced by an object vibrating with a, high frequency is low and the sound is called a grave sound. (ii) The pitch of the sound produced by an object vibrating with a, high frequency is high and the sound is called shrill sound. Thus, the higher will be its, pitch and vice versa., 2.,,,, 3. (a) Noise from any source that caused is turbated by an object vibrating with a, high frequency is high and the sound is called a grave sound. (ii) The pitch of the sound produced by an object vibrating with a, high frequency is high and the sound is called a grave sound. (ii) The pitch of the sound produced by an object vibrating with a, high frequency is high and the sound is called a grave sound. (ii) The pitch of the sound produced by an object vibrating with a, high frequency is high and the sound is called a grave sound. (ii) The pitch of the sound by an object vibrating with a, high frequency is high and the sound is called a grave sound. (ii) The pitch of the sound produced by an object vibrating with a, high frequency is high and the sound is the frequency of the sound, high frequency is high and the sound is the frequency is high and the sound is the frequency of the sound, is high frequency is high

2. A LED means a Light Emitting Diode. It is similar to a bulb but it runs on, a very low voltage., 3. (i) Heating effect, (ii) Magnetic effect, (iii) Chemical effect, (iii) Chemical

(b), 4. (a), 5. (c), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 205, 1. (b), 2. (c), 3. (a), 4. (c), 5. (c), 4. (c), 5. (c), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 205, 1. (b), 2. (c), 3. (a), 4. (c), 7. (c), 8. (c

No, distilled water does not conduct electricity.

We can make it, conductive by adding –, • salts like common salt, copper sulphate, sodium nitrate, zinc, chloride, etc., • bases like sodium hydroxide, ammonium hydroxide, potassium, hydroxide, etc., D. Short Answer Type-II Questions:, 1. Non-electrolytes are chemical compounds which do not conduct, electricity when dissolved in water.

Glucose and alcohol are nonelectrolytes., 2.

The four applications of electrolysis are—, (i) Extraction of metals from their ores: For example, when an electric, current is passed through molten sodium is, deposited at the cathode and chlorine gas is evolved at the anode., (ii) Manufacture of chemicals: For example, manufacture of oxygen, gas, chlorine gas, hydrogen gas is done by electrolysis., (iii) Refining of metals (electrolytic refining): For example, many, metals like copper, zinc, tin, silver, gold and nickel are refined by, this method., (iv) Electroplating: The method of coating the metal's surface of a, given article with a thin layer of superior metal with the help of, electric current is called electroplating. For example, coating of iron, with chromium or nickel or zinc to protect it from rusting., 3. Iron objects are electroplated with chromium to protect them from, rusting is done in many objects such as car, parts, bath taps, kitchen utensils, gas burners, bicycle handles, wheel, rims and many others., 4.

(a) The method of coating the metal's surface of a given article with, a thin layer of superior metal with the help of electric current is, called electroplating. (b) No, it is not right to cheat others and make profit because it is, being dishonest and is a crime. Such things creates an insecurity in, leading a good and honest life in future. Also, we should

never be, selfish and take undue advantage of a common men's belief and, faith in the jewellers., E. Long Answer Questions;, 1. Chemical effects of electric current are used in the following ways:, (a) Extraction of metals from their ores: Electrolysis is used in the, extraction of metals from their ores.

For example, when an electric, 64, , Teacher's Resource Pack SCIENCE-8 Page 52: current is passed through molten sodium chloride, sodium is evolved and chlorine gas is evolved in the place gas in the gas and chlorine gas is evolved and chlorine gas is evolved in the gas and chlorine gas and chlorine gas i

Thus, it is dangerous, for his life., 2. Sea water is water containing salts, so it provides ions for electrical, conductivity in comparison to drinking water which lacks salts. Thus,, the bulb glows more in case of sea water., G. Application Based Questions:, 1. On interchanging the connections of the electrodes, the copper ions, previously deposited on the iron strip (previously cathode now anode), will move towards the copper strip (previously anode now cathode)., Teacher's Resource Pack SCIENCE-8, 65 Page 53: H., 2. The liquids that contain impurities (which serve as free ions) conduct, electricity, whereas liquids such as distilled water that lack ions do not, conduct electricity. Practical Skill Based Questions:, No, distilled water does not conduct electricity. We can make it conducting, by adding –, • salts like common salt, copper sulphate, sodium hydroxide, ammonium hydroxide and potassium, hydroxide., 15. Some Natural Phenomena, Think, Page No. 210, No, because in case of wet hair friction is very less so the comb is not electrically, charged due to lack of force and therefore, transfer of charge does not take, place., Think, Page No. 213, When the weather is dry, synthetic fibres get charged. The force of attraction, that acts between the charged particles, opposes their detachment and creates, a crackling sound while taking of sweater., Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 222, 1.

(c), 2. (c), 3.

(a), 4.

(b), 5. (a), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 222, 1.

(a), 4.

(d), SECTION A, CLASS RESPONSE, A. Oral questions; 1. Storms, cyclones, lightning, earthquakes, 2. When ebonite rod is rubbed with the wool, it gets negatively charged, 3. A kite, silk string, iron key, silk ribbon, thin metal wire and Leyden par, 4. The surface of the earth is not one continuous piece. It is broken into, many large pieces called tectonic plates, B. Science quiz:, 1. Epicentre, 2. Tsunamis, 3. Charged, WORKSHEET, A. Tick (3) the correct options:, 1. (d), 2. (b), 3. (b), 4. (c), 66, Teacher's Resource Pack SCIENCE-8 Page 54: B., C., Circle the hid metal wire as others are layers of, the earth., 3. Drought — It is not caused due to earthquakes, whereas others are, consequences of an earthquake, Fill in the blanks; 1. electric current, 2. thunder, 3. Sensitic waves, SECTION B, A., B., n. C., D., Multiple Choice Questions (MCQs) Scientific/Practical skills; 1. (e), 2. (a), 3. (b), Very Short Answer Questions; 1. An object is said to be charged when it acquires electric charges by, rubbing or by any other method from another object, 2. Seismograph, 3. The loud sound produced during lightning is called thunder, 4. A comb rubbed on dry hair attracts pieces of paper because a kind of, force is produced by a charged object on another charged or uncharged or uncharged, object is known as electrostatic force, 4. We say that repulsion is a sure test of charge on an object. When the, object under examination is charged and has the same charge as that on, the charged object, we are sure that the, object under examination is charged and has the same charge as that on, the charged object, we are sure that the, object under examination is charged and has the same charge as that on, the charged object, we are sure that the, object under examination is charged and has the same charge as that on, the charged object, we are sure that the, object under examination is charged object, we are sure that the, object under exemptions, (iii) Volcanic eruptions, (iii) Dislocation (or faults) of the crust, (iv) Underground n

Precautions to be taken during an earthquake-, (i) Move to an open area immediately., (ii) Move away from buildings, trees, bridges, flyovers or overhead, electric cable lines or any other structures that can collapse., (iii) While travelling in a car or bus do not come out.

Drive slowly to an, open area., E. Long Answer Questions:, 1. (a) An electroscope is an instrument used for detecting electrical, charge and its nature on an object., (b) See Fig. (a), (c) Uses of a gold-leaf electroscope are., (i) Detection of electrical charge, (iii) To identify the nature of, charge, 2. (a) A cloud has the negative charges, concentrated at the base and, positive charges concentrated at, its upper region. When a charged, cloud passes over a tall building or a tall tree, it induces an opposite, charge on them. The negative charges accumulated in the clouds, rushes down this path, giving rise to an electric discharge in the, form of lightning strike., (b) A lightning conductor is a device which is fixed on the top of tall, buildings to protect them from damage due to lightning, (c) When the lightning conductor provides an, easy path for the charge to pass through to the earth's crust through the air between the two, oppositely charged clouds.

It is seen as an intense spark of electricity in, the esky, 2. A car with closed windows is a safe place during lightning because the, body of the car acts as a conducting path for the lightning because the, charged clouds. So lightning because the, charged clouds on because of the positively charged. (b) This is because of the positively charged conductor. The electrons, in the uncharged rod on being rubbed with wool will get negatively, charged.

This when brought in contact with the brass rod,, will deliver the same charge to the leaves of gold. The gold leaf, that get charge by induction will carry the same charge and, thus, the negative charge will move the leaves apart due to, repulsion., (b) Gold leaves attain a negative charge will move the leaves apart due to, repulsion., (b) Gold leaves attain a negative charge will move the leaves apart due to, repulsion., (b) Gold leaves attain a negative charge will move the leaves apart due to, repulsion., (b) Gold leaves attain a negative charge will move the leaves apart due to, repulsion.

(c), 3. (b), 4. (c), 5. (a), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 240, 1. (b), 2. (b), 3. (a), 4. (d), 5. (b), , SECTION A, CLASS RESPONSE, A. Oral questions:, 1. The process of sending back the light rays which fall on the surface of an, object is called reflection of light., 2. The phenomenon of splitting of white light into its component colours, on passing through a transparent medium like a glass prism is called, dispersion of light., 3. The band

Eris and Ceres, WORKSHEET, A. Tick (3) the correct options:, 1. (a), 2. (b), 3.

correct options: Page No. 233, 1.

(a), 2.

The near point of a normal human eye is about 25 cm., Short Answer Type-I Questions:, 1. The laws of reflection are as follows:, (i) The angle of incidence and the, reflected ray, all lie in the same plane., 2., , D., , 3. The ability of the eye lens to adjust its focal

length, so as to see the, objects located anywhere is called the power of accommodation., Short Answer Type-II Questions:, 1., 7eacher's Resource Pack SCIENCE-8, 71 Page 59: 2., 3. A person with hypermetropia or far-sightedness can see distant (far, off) objects clearly but cannot see nearby objects distinctly. It is corrected by using spectacles with a convex lens., 4.

(a) The condition when either the cornea or the eye lens become, opaque due to some diseases or defects and a person cannot see, is known as curable blindness. It can be cured., (b) No, it is not right to make fun of them, they may feel under privileged and hurt and we, should never hurt the feelings of other people. We should never, make fun of people or behave with them in a way we don't want, others to behave with us., E. Long Answer Questions:, 1. (a) Incident ray: The ray of light which falls on the mirror's reflecting, surface is called incident ray., (b) Reflected ray: The ray of light which is sent back after reflection, by the mirror surface at the point of incidence is called reflected, ray., (c) Normal at the point of incidence: The normal is a line drawn at, perpendicular or right angle to the mirror surface at the point of incidence; (d) Angle of incidence; (e) Angle of incidence, (e) Angle of incidence., (d) Angle of incidence; and the point of incidence is called the angle of, reflection., 72, 7eacher's Resource Pack SCIENCE-8 Page 60: 2. (a) Sclera: It is the outer most covering of the eye. It protects the vident point of incidence is called the angle of incidence., (e) Angle of incidence. It allows the reflection and point of incidence is called the angle of incidence., (e) Angle of incidence., (e) Angle of incidence. (f) Angle of incidence. It allows the reflection and the point of incidence is called the angle of incidence. (e) Angle of incidence. (f) Angle of incidence is called the angle of incidence is called the angle of incidence. (e) Angle of incidence. (f) Angle of incidence. (f) Angle of incidence is called the angle

delicate membrane-like structure, whereas glass lenses are, hard., (ii) has the ability to accommodate according to the distance of the, object, whereas the glass lens has a fixed role., G. Application Based Questions:, 1. If a student is unable to read a book, it shows that the he/she is suffering, from hypermetropia (far-sightedness), so cannot see close objects, properly. It can be corrected by using conceve lens in the spectacles., 2.

Myopia (short-sightedness). It can be corrected by using concave lens., Think And Answer, Tick (3) the correct options:, 1.

(b), 2. (c), Teacher's Resource Pack SCIENCE-8, , 73 Page 61 : 17. Stars and the Solar System, cannot move away from the Sun because of the, gravitational force between the planets and the Sun., Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 253, 1. (d), 2. (c), 3. (a), 4. (c), Multiple Choice Questions (MCQs). Tick (3) the correct options: Page No. 259, 1. (b), 2. (a), 3. (b), 4. (d), , SECTION A, CLASS RESPONSE, A. Oral questions:, 1. The Stars, the planets, the Sun and the asteroids, meteors, meteorites, comets, 2. Uranus and Venus, 3. Asteroids are small, irregular heavenly bodies of rocks and metals which, revolve around the sun in the gap between the orbits of Mars and, Jupiter., B. Science quiz:, 1. 1011 stars, 2.

A comet is a small body of ice and dust that moves around the Sun in an, elliptical orbit., 3.

(b), 4. (b), 5. (a), B. Circle the odd ones. Give reasons for your choice:, 1. Aryabhatta \rightarrow It is an artificial satellite, whereas others are constellations., C. Fill in the blanks:, 1. Sirius, 2. Hunter, 3. Halley's, 4. meteorite, 74, Teacher's Resource Pack SCIENCE-8 Page 62: SECTION B, A., B., C., Multiple Choice Questions:, 1. (a), 2. (c), 3. (c), Very Short Answer Questions:, 1. (a) 123 °C, (b) – 233 °C, 2. Light year is the distance travelled by the light in a year., 1 light year = 9.46 × 1012 kilometres, Light year is a unit of distance not the unit of time., 3.

Jupiter, 4. We can never see the backside of the moon from the Earth because the, moon rotates about its axis in about the same face of the moon turned towards the, earth at all times., Short Answer Type-I Questions:, 1. The Sun appears to be larger and brighter than other stars because it is, much nearer/closer to the Earth than any other star., 2. Mars is called the red planet because it is red in colour. The red colour, comes from iron oxide (rust) in its soil., 3. The Pole Star appears stationary as seen from the Earth because it lies, directly above the north pole close to the axis of rotation of the Earth., 4. The stars which appear in the form of closed groups and form, recognisable shapes and patterns are known as constellations. Ursa, Major and Orion are two important constellations., 1.

(i) Ursa Minor is also known as 'Little Dipper' or 'Little Bear' during the, summer season. It is clearly seen in the northern part of the sky in, July., (ii) There are seven prominent stars in Ursa Minor are closer and less brighter

than in Ursa, Major., 2.

The Earth is the only planet in the solar system on which life is known to, exist. Special environmental conditions required for existence of life on, earth are— (write any three)—, , (i) Earth is at the right distance from the Sun., , (ii) Presence of water, (iv) A suitable atmosphere, (v) A blanket of ozone, Teacher's Resource Pack SCIENCE-8, , 75 Page 63: 3. S. No. Parameters, , 4., , Meteors, , Meteorites do not, burn completely on, entering the Earth's, atmosphere and land, on the Earth's surface., , (ii), , Size, , The size of this, heavenly body is very, small as compared to, the size of meteorites., , They size of this, heavenly body is very, big., , (iii), , Damage, , They do not cause any, damage., , They do not cause any, damage., , They help the, scientists to know, about the nature of, matter in outer space., , Planets are solid heavenly bodies which revolve around the, Sun in closed elliptical orbits., (ii) A planet has no light of its own.

It shines because it reflects, the light of the Sun., (iii) Different planets have one or more natural satellites., (b) We learn to be disciplined, punctual and focused in life like these, heavenly bodies. They teach us to be energetic and spread the, warmth and light all around us., E. Long Answer Questions:, 1. (a) New

moon: When the moon is in between the Earth and the Sun, then the side of the moon night, it is very dark, having no moonlight at all., (b) Crescent moon: The phase of moon when a small portion of moon, is it by the Sun is called a crescent moon., (c) First quarter moon: After 7 days of new moon high is called a new moon when we see more than half of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, it is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, lit is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night, we are able to see the sunlit side of the moon, lit is, called the gibbous moon (at 10th day of new moon). (e) Full moon: After 14 days or after two weeks' time of new moon, night. (e) In the moon is in the moon is the

dissolved acids is called acid, rain., 78, Teacher's Resource Pack SCIENCE-8 Page 66: WORKSHEET, A. Tick (3) the correct options:, 1. (b), 2. (c), 3. (a), 4. (c), B. Fill in the blanks:, 1. carbon dioxide, 2. temperature, 3. Chlorofluorocarbons, C. Match the following:, 1. (b), 2. (d), 3. (a), 4. (c), SECTION B, A., B., C., D., Multiple Choice Questions (MCQs) Scientific/Practical skills:, 1. (b), 2. (c), 3. (d), Very Short Answer Questions:, 1. Eutrophication, 2. Solar energy, 3. The oxides of sulphur and nitrogen and unburnt hydrocarbons produced, due to burning of fossil fuels causes acid rain.,

Short Answer Type-I Questions:, 1. Global warming is the rise in average temperature of the atmosphere of, the earth due to the increase in greenhouse effect., 2. Methods to control air pollution—, (i) Use catalytic converters in automobiles which convert the harmful, gases into harmless gases., (ii) We should grow more plants and trees to reduce

carbon dioxide, concentration in the air., (iii) Replace use of wood, coal or kerosene with LPG for domestic use., (iv) Encourage the use of public transport., 3. Sedimentation, loading, filtration, chlorination and storage, 4. (i) Excessive use of fertilisers and pesticides should be discouraged., (ii) Dead bodies should not be disposed of in a river or a lake., (iii) Washing clothes, cleaning utensils or taking bath near water bodies, should be restricted, (iv) Domestic sewage should be treated before being released into, water bodies, should be restricted, (iv) Domestic sewage should be treated before being released into, water bodies, should be restricted. beings such as cataract, skin cancer, dimming of, eyesight, etc., (ii) Harmful ultraviolet radiations can bring about changes in the gene, structure leading to mutations., , Teacher's Resource Pack SCIENCE-8, , 79 Page 67: (iii) Harmful ultraviolet radiations can be being such as cataract, skin cancer, dimming of, eyesight, etc., (ii) Harmful ultraviolet radiations can be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be be be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be be be being such as cataract, skin cancer, dimming of, eyesight, etc., (iii) Harmful ultraviolet radiations can be be be being such as cataract, skin cancer, and the beautiful ultraviolet radiations can be be be be be below as cataract, and the beautiful ultraviolet radiations can be be be below as cataract, and the beautiful ultraviolet radiations can be be be below as cataract, and the beautiful ultraviolet radiations can be be be below as cataract, and the beautiful ultraviolet radiations can be be be below as cataract, and the beautiful ultraviolet radiations can be be be below as cataract, and the beautiful ultraviolet radiations can be be be below as cataracted as catarac causes of water pollution are:, (i) Industrial sewage: The discharge of untreated industrial sewage, directly into water pollution., (ii) Domestic sewage: Liquid wastes from domestic activities, such, as kitchen and toilets, are discharged into rivers through sewage, systems causing water pollution., (iii) Human activities: Bathing of human beings and animals in or near, lakes, rivers, etc., pollutes the water bodies which, results in water pollution., (v) Oil spill: Oil spills from huge tankers is one of the major cause of, water pollution which affects the marine plants and animals., 3. The damaging effects of acid rain are:, (a) Acid rain makes the water of lakes and rivers acidic leading to, destruction of aquatic plants and animals., (c) Acid rain destroys monuments and buildings., (d) Acid rain promotes corrosion of metallic objects like railway bridges, and gates., 4. (a) No, Mr Mehta should not shift to petrol instead of CNG because, CNG is a cleaner fuel and is good for the environment as it produces, less pollutants than coal, petrol, etc., (b) It is right to use catalytic converters in the cars because they convert, the harmful gases into harmless gases., E. Long Answer Questions:, 1. Harmful effects of air pollution are as follows:, (i) Carbon monoxide is a very poisonous gas. When inhaled in excess, it, can kill a person without warning as it is a colourless and damage lungs., (ii) Oxides of nitrogen cause lung congestion., (iv) Fumes coming out of chemical industries cause irritation in eyes,, nose and throat., 80, Teacher's Resource Pack SCIENCE-8 Page 68: (v) Particles of lead oxide present in the automobile exhausts can, affect the brain of children and cause mental disorder., (vi) Particles of lead oxide present in the automobile exhausts can, affect the brain of children and cause mental disorder. causes, increase in growth of algae and other weeds in water bodies. Due to, respiration carried out by algae, a large amount of, oxygen in the water. This is because microorganisms use the oxygen for, the decomposition of dead algae. Once the level of dissolved oxygen, falls, fishes and most other aquatic animals die due to suffocation., This loss of dissolved oxygen from water in water bodies is called, eutrophication., Biological magnification: Pesticides and insecticides like DDT are, poisonous chemical substances which are used in large quantities to, kill pests and protect the plants from diseases. Excess of pesticides find, their way to water bodies through rainwater. The pesticides enter the, food chain, phytoplanktons are consumed by zooplanktons, which are further consumed by small fishes. The small fishes are, consumed by large fishes, which in turn are eaten by fish-eating birds., At each level, the concentration of pesticides in the, body of living organisms at each trophic level of a food chain is called, biological magnification., 3. (a) The phenomenon due to which the earth's atmosphere traps solar, radiations because of the presence of gases like carbon dioxide, CFC (chlorofluorocarbons) and, methane are the greenhouse gases., (b) Global warming is the rise in average temperature of the, atmosphere of the earth due to the increase in greenhouse effect., (i) Polar caps would melt and water would flow into the seas. If, the level of water in the seas increases, low lying areas near, the coasts would be submerged., (ii) Climate and rainfall pattern would change., (iii) It affects agriculture and

HOTS (Higher Order Thinking Skills) Questions:, 1. If there was no greenhouse effect, earth's surface would be too cold to, sustain life., Teacher's Resource Pack SCIENCE-8, , 81 Page 69: G., , 2.

The excessive use of fertilisers causes eutrophication. Since, fertilisers, are rich in nutrients, and when with the flow of water they are washed, to the water reservoirs, they provide nutrients to the aquatic flora, causing increased algal growth, which increases the biological oxygen, demand., Due to insufficient oxygen, organic decaying happens causing, deterioration of water bodies. This is called eutrophication., 3.

Using water from wells for drinking purpose is safe in comparison to, river water. This is because river water contains heavy minerals and, toxic wastes., Application Based Question:, The house on the roadside are more prone to both air and, noise

Using water from wells for drinking purpose is safe in comparison to, river water. This is because river water contains heavy minerals and, toxic wastes., Application Based Question:, The house on the roadside. This is because river water contains heavy minerals and, toxic wastes., Application Based Question:, The house on the roadsides will be affected more by the fumes, released by automobile exhausts than the people living near the park. Also,, the continuous movement of vehicles on the road and the sound of their, horns would cause disturbances leading to noise pollution., Periodic Assessment-1 (Based on Chapters 1 to 4), A., B., , C., , Tick () the correct answers:, 1. (a), 2. (a), 3. (b), 4. (c), Fill in the blanks:, 1. ploughing, 2. Lactobacillus, Very short answer questions:, 1. The unwanted plants which grow The process of conversion of sugar into alcohol by the action of microbes, like yeast, is called fermentation., 2. Substances through natural processes such as action of bacteria are, called non-biodegradable substances., Short answer questions:, 1. The unwanted plants which grow

along with a cultivated (main) crop, in a field are called weeds Cyperus and Achyranthus are two common, weeds., 2. When an iron object is left in damp air (or moisture) for a considerable, time, it geats its called the force of friction., Iron., Fon., Fon., Tis is called weeds Cyperus and Achyranthus are two common, weeds., 2. When an iron object is left in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable, time, it geats (in damp air (or moisture) for a considerable with a redish draw (in a considerable, time, it geats (in a considerable with a redish draw (in a considerable with a redis

Copper is used for making utensils, car radiators and calorimeters., Aluminuim is used for making paints to prevent rusting of iron., 5. Destructive distillation is the process of breaking coal by heating it, to high temperature in the absence of air. It produces coke, coal tar,, ammoniacal liquor and coal gas., C. Short answer type II questions:, 1. Parameters, , Fertilisers, , Manure, , Nature, , These are inorganic salts., , It is a natural organic, substance., , Amount of, nutrients, present, , These are rich in plant, nutrients like nitrogen,, phosphorus and, posphorus and, posph

When it is poured over burning electrical wires, or appliances, it causes electric shocks to the people involved in, the firefighting operations.

This electric shock can even kill the, people., (b) It is dangerous to sleep in a closed room with coal burning inside,, on a cold winter night. This is because no fresh air can enter the, room and when coal burns in an insufficient supply of oxygen (due, to closed room), a lot of carbon monoxide is produced. This can, lead to suffocation or may even cause death., Species that are at a high risk of getting extinct, in near future, due, to decline in their number and a drastic change in habitat are called, endangered species., Teacher's Resource Pack SCIENCE-8, 85 Page 73: Species that already exist in low numbers and may become endangered, if the causative factors like habitat destruction, environmental, disturbance or illegal hunting continue to operate are called vulnerable, species. For example, hippopotamus, polar bear, golden langur, chinkara, deer, blood pheasant are vulnerable species., 8. S. No., Prokaryotic cells, (i), These cells do not have a, well organised nucleus due, to the absence of nuclear,

membrane., , These cells have a well, organised nucleus with, nuclear membrane., , (ii), , Bacteria and blue-green algae, are examples of prokaryotic, cells., , Plants, animals, fungi,, protozoa, etc., are eukaryotic, cells., , Plants, animals, fungi,, protozoa, etc., are eukaryotic, cells., , 9., , 10. (a), , , , , , D., , 86, , Organs in the male reproductive system are:, (i) A pair of testes, (ii) Two sperm ducts, (iii) Urethra, (iv) Penis, Organs in the female reproductive system are:, (i) A pair of ovaries, (ii) Oviducts, (iii) Uterus, (iv) Vagina, (b) Function:, Testes: It produces male gametes called ova or eggs and, also secretes the female sex hormones called oestrogen and, progesterone., Long answer questions:, 1. (a) The process by which spoilage of food is prevented using chemical, or physical methods is called food preservatives., Teacher's Resource Pack SCIENCE-8 Page 74: (b) Advantages of Food Preservation, (i) It decreases the wastage of food by avoiding spoilage., (ii) It increases the storage period of food availability at distant places and during the, off season., 2. Advantages of synthetic fibres, (a) High tensile strength: Synthetic fibres are very strong and have high, tensile strength (as they can hold large weight without breaking) in, comparison to natural fibres are fairly elastic and, flexible as they can be stretched or compressed to some extent., On releasing the force applied, they regain their original shape and, size., , (d) Wrinkle-resistant: Most synthetic fibres do not get crumpled, easily during washing or wearing. They are wrinkle-free and keep, permanent creases., , (e) Abrasion-resistant: Most of the synthetic fibres have a high, abrasion (wear and tear) resistance. So, the clothes made of, synthetic fibres are long lasting or durable., , (g) Lightweight: Most synthetic fibres are quite lightweight. Natural, fibres are comparatively heavy., , (h) Inertness: Most synthetic fibres are chemically more inert than the, natural fibres., (i) Less expensive: Synthetic fibres are less expensive and more, affordable than the natural fibres., , Non-metals, , Reaction with Most of the metals react, oxygen, with oxygen to form, basic oxides., , Non-metals, react with, oxygen to form acidic or, neutral oxides., , Reaction with Metals react with water, water, to form metal hydroxide, or metal oxide and, hydrogen gas., , Non-metals do not react, with water under normal, conditions., , Teacher's Resource Pack SCIENCE-8, , 87 Page 75: Reaction with Metals react with acids, acids, to form respective salts, and hydrogen gas., , Non-metals do not react, with acids., , Reaction with Reactive metals react, bases, with bases to form their, respective, non-metals displacement reaction, displacemen non-metals from, their salt solutions., , 4. The clearing of forests (by cutting down forest trees) over a wide area is, called deforestation. Deforestation has taken place due to the following, reasons:, • To build homes, factories, roads and dams for the increasing, human population, • To obtain more agricultural land for cultivation of crops for the, growing population, • For mining of minerals such as coal, petroleum and ores, All the above causes of deforestation are human-made causes. There, are some natural causes of deforestation also like forest fires, severe, droughts, attacks of insects and pests., Consequences of deforestation also like forest fires, severe, droughts, attacks of insects and pests., Consequences of deforestation are human-made causes. There, are some natural causes soil erosion and makes the soil infertile. Due to gradual, erosion of fertile topsoil, the land gets converted into a desert. This, is called desertification., • Deforestation increases the level of carbon dioxide in the, atmosphere and disturbs the natural balance of gases in the, atmosphere and disturbs the material balance of gases in the, atmosphere and disturbs the material balance of gases in the concentration of carbon dioxide may, lead to an increase in global temperature which is called global, warming. Global warming disturbs the material balance of gases in the concentration of carbon dioxide may, lead to an increase in global temperature which is called global, warming disturbs the material balance of gases in the concentration of carbon dioxide may, lead to an increase in global temperature which is called global, warming disturbs the material balance of gases in the concentration of carbon dioxide may, lead to an increase in global temperature which is called global, warming disturbs the material balance of gases in the concentration of carbon dioxide may, lead to an increase in global temperature which is called global temperature. drought and melting of glaciers., • It decreases the water-holding capacity of the soil and can cause, floods., • Forests are natural habitat of many species which poses a, threat to their survival, , 88, , Teacher's Resource Pack SCIENCE-8 Page 76: 5., nucleus, , nucleus, , nucleur envelope, (two membranes), nuclear pore, nucleolus, , cell wall, , nucleoplasm, smooth, endoplasmic, reticulum, cytoplasm, , plasma, membrane, rough, endoplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, cytoplasmic, reticulum, chloroplasmic, reticulum, cytoplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, cytoplasmic, reticulum, chloroplasmic, reticulum, cytoplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, chloroplasmic, reticulum, cytoplasmic, reticulum, chloroplasmic, retic hydroxide, we observe tiny bubbles of hydrogen gas in the, solution on bringing a burning match stick near the mouth of test tube,, the gas burns fire with a pop sound., 2. (a) Dry leaves have low ignition temperature because their ignition temperature., Yearly Examination (Based on Chapters 2, 4, 5, 10 to 18), A., Very short answer questions:, 1. Acquired Immuno Deficiency Syndrome, 2. Male sex hormone: testosterone, Female sex hormones: oestrogen and progesterone, 3. Two types of non-contact forces are:, (i) Magnetic force, (ii) Electrostatic force, 4. An echo is the repetition of the original sound heard after the sound is, reflected from a distant, dense and rigid object (such as a high building,, cliff, etc)., 5. Flute, shehnai/trumpet, 6. The method of coating the metal's surface with a thin layer of superior, metal with the help of electric current is called electroplating., 7. Largest planet: Jupiter, Brightest plant: Venus, Teacher's Resource Pack SCIENCE-8, , 89 Page 77: 8. Two uses of artificial satellites are:, (i) They are used for transmitting radio and television signals., 9. Air and sunlight, 10. When sodium metal reacts with oxygen at room temperature, it forms a, basic oxide called sodium oxide., 11. Copper wires are used in household electric wiring because it is a good, conductor of electricity., B. Short answer type I guestions:, 1. Skiers use long and flat skis to slide over the snow, and enables the skier to slide over the snow without sinking in the snow., 2., , Sliding friction, , Rolling friction, , It is the opposing force that, comes into play when one object, is actually rolling over the surface, of another object, , 3. Those musical instruments in which vibrating skin or membrane, produces a musical sound are called percussion instruments. For, example, tabla, dholak, mridangam, drum, etc., 4. The main limited available in limited a crisis., (ii) Air pollution: The burning of fossil fuels produces gases like carbon, dioxide, carbon monoxide, sulphur dioxide and smoke., 5. Two uses of electrolysis are:, (i) It is used in the extraction of metals from their ores., (ii) It is used for refining metals., C. Short answer type II questions:, 1. The three secondary sexual characters in males are:, (i) Hair grow under armpits and in pubic region between the thighs., (ii) Hair also grow on other parts of the body like chest and face., (iii) Body becomes more muscular due to development of muscles., The three secondary sexual characters in females are:, , (i) Hair grow under armpits and pubic region., (ii) Ovaries start to release eggs (or ova)., (iii) Menstrual cycle (MC) or monthly period starts., 90, Teacher's Resource Pack SCIENCE-8 Page 78: 2. (a) The physical quantity which measures the effect of force per unit, area is called pressure. Its unit is pascal (Pa)., , (b) Here, force (F) = 200 N, , Area of contact (A) = 5 m2, , , We know that, pressure (P) = , , Force (F), Area (A), , 200, 5, = 40 N/m2 or 40 Pa, 3. Advantages of friction are:, (i) It helps us walk., (ii) The friction between the tyres of vehicles and the ground helps, them move on the ground without slipping., (iii) It helps us to write., (iv) It is the force of friction which holds screws and nails in the wood., (v) It is the force of friction between the brake lining and the drum of, the wheel of vehicles that stops it on applying brakes.,, So, , P=, , 4., , 5. Chlorofluorocarbons (CFCs) which are used in refrigerators, air, conditioners and aerosol sprays when released in air, damage ozone, layer of the atmosphere., Damaging effects of ozone layer depletion are:, (i) Harmful ultraviolet radiations can bring about changes in the gene, structure leading to mutations., (ii) Harmful ultraviolet radiations cause damage to early developmental, stages of fish, crabs and other animals., Teacher's Resource Pack SCIENCE-8, , 91 Page 79: 6. Noise from any source that causes disturbance or discomfort of any kind, in the environment is called noise pollution., Harmful effects of noise pollution are:, (i) It causes nervous tension, irritation, earache, headache and high, blood pressure., (ii) It may cause lack of concentration in work or studies., (iii) Loud music during night disturbs our sleep., (iv) Prolonged exposure to high level noise can affect the eardrum and, may lead to temporary or even permanent loss of hearing., 7. The process of separating various constituents or useful fractions of, petroleum is known as refining of petroleum., Petroleum refineries in India are located at Chennai, Cochin, Mathura, Digboi, Mumbai, Koyali, Haldia, Barauni, etc., 8. Three uses of natural gas are:, (i) It is used as a starting material for the manufacture of a number of, chemicals and fertilisers., (ii) It is used for manufacturing of carbon black which is used in rubber, industry as a strengthening agent., (iii) It is used to obtain hydrogen on industrial scale which is used in, manufacturing of ammonia., 9. The displacement reactions is a chemical reaction in which a more, reactive element displaces a less reactive element from its compound, (salt solution), , potassium, bromide, , Zn, , —, , zinc, , z potassium, chloride, , Cu, copper, , Br2, , Bromine, , 10. Lactobacillus bacteria help make curd from milk. Curd is formed when a, protein called casein, present in milk, clumps together to form solidified, mass. Casein coagulation (clump formation) takes place only when the, milk is acidic. ---, , , 92, , (containing, Lactobacillus, bacteria), , using the non-fat, components of milk to, produce acidic product, , casein coagulates, , Milk -→ Formation of, becomes in acidic milk, A spoonful of curd contains the bacteria Lactobacillus, which promote the formation of curd from milk., Lactobacillus multiplies, , milk + curd curd (from, acidic, milk), Teacher's Resource Pack SCIENCE-8 Page 80: D., Long answer questions:, 1. We know that chromosomes are present inside the nucleus of every, cell. Chromosomes are thread-like structures that carry information in, the form of genes. All human beings have 23 pairs of chromosomes in, the nucleus of their cells. Out of these 46 chromosomes, 44 are called, autosomes, are identical in males and females are represented by XX., • In males, the cells contain two identical X chromosomes, So, the, sex chromosomes in females are represented by XX., • In males, the cells contain two different chromosomes X and Y. So,, the sex chromosome whereas a sperm (male gamete), may contain either X or Y chromosome. An egg (female gamete), always contains X chromosome fertilises the egg, the zygote, would have two X chromosomes. It develops into a female child, • If the sperm carrying the Y chromosome fertilises the egg, the, zygote would have one X and one Y chromosome. It develops into a female child figure., , So, the sex of a baby totally depends on the father's sperm and not on, the mother's egg., 2. A push or a pull on an object is called force. Effects of force are:, (i) Force can change the direction of motion of the moving object., (ii) Force can change the speed of a moving object., (iii) Force can change the shape and size of an object., 3. An earthquake is a sudden shaking of the earth's crust which lasts for, a very short time. It is caused by a disturbance deep inside the earth's, crust., Teacher's Resource Pack SCIENCE-8, , 93 Page 81: Causes of earthquake, The main causes of earthquake are:, • Movement of the tectonic plates,, • Volcanic eruptions,, • Dislocation (or faults) of the crust and, • Underground nuclear explosion, (a) Movement of the tectonic plates. The surface of the earth is not, one continuous piece, but it is broken into many large pieces called, tectonic plates. It is more like a jigsaw of blocks that fit together., The world is divided into seven large tectonic plates. Due to the slow movement (convection current), inside the earth, these plates move with respect to one another by, about a few inches in a year like rafts on a gentle ocean. While this, may seem very small, the magnitude of energy developed by this, 'small' movement is enormous., The movement sometimes causes the edges of the tectonic, plates to grind each other with a force. They may get deformed, displaced, crushed or fractured. They may also slide/slip under each, other. They may even move apart. Such changes in the plates, send a tremor or set up vibrations; through the crust causing, earthquakes.. (b) Volcanic eruptions; Volcanic eruptions; through the crust causing, earthquakes.. (c) Volcanic eruptions; vo eruptions causes vibrations in, the crust. These vibrations in, the crust. These vibrations of the tectonic plates have created weak points in the, earth's crust called faults. Most faults occur along

the earth, these plates move with respect to one another by, about a few inches in a year like rafts on a gentle ocean. While this, may seem very small, the magnitude of energy developed by this, 'small' movement is enormous., The movement sentence causes the edges of the tectonic, plates to grid pressure and the tectoric, plates to grid pressure and the tectoric plates and the see are the zones are also known as seismic or fault zone. (a) Underground nuclear explosions to the tectonic plates and these are the zones where earthquakes in the area around. Such earthquakes occur at the time of volcanic eruption or, before it. (c) Dislocation (or faults) of the crust. These weak zones are also known as seismic or fault zone. (d) Underground nuclear explosions cause very powerful vibrations. These velvirations cause, and plane mirror is of the same size and shape as, it is plane than the carracteristics of the image formed by the plane mirror is refer. (iii) The image on a plane mirror is explosions. Underground nuclear explosions cause very powerful vibrations. These velvirations cause, and the nuclear explosions and the nuclear explosions cause very powerful vibrations. These velvirations cause, and the nuclear explosions in the carriary in the plane mirror is refer. (iii) The image on a plane mirror is explosions. Underground nuclear explosions cause very powerful vibrations. These velvirations cause where earthquakes in the area around the nuclear explosions. Underground nuclear explosions cause very powerful vibrations. These eval zone the carriary is the carriary in the plane in the plane

To show that liquids exert pressure on the base of the container, Things needed: A transparent glass tube opened at both ends. To one end, of the tube, tie a rubber balloon with the help of a thread. Now, hold the, tube in vertical position and pour some water into it., Observation: You observe that the rubber balloon bulges out [Fig. (a)]., Now, pour more water in the tube. You see that the size of the bulge, increases [Fig. (b)]., Conclusion:, (a) The liquids exert pressure on the base of the container in which, they are poured., (b) Pressure exerted by water at the bottom of the container depends, on the height of its column. More is the height, more is the pressure, and vice versa., Teacher's Resource Pack SCIENCE-8,, 97