

**CHRIST KING HR. SEC. SCHOOL, KOHIMA**  
**CLASS: 6**  
**SUBJECT: SCIENCE**

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**CHAPTER- 2**

**C. Short type questions:**

1. Differentiate between minerals and vitamins.

Ans: Minerals are a group of substances needed by the body for normal functioning and restoring body component. While, vitamins are a group of organic substances needed by the body for normal functioning and enzyme activity.

2. **What is obesity?**

Ans: Obesity is the state of disorder in the boy where a person becomes over weight and develops breathing problems. Obesity is caused due to excess intake of fast or junk food, like noodles, chips, pizzas, burgers, ice-cream etc.

3. **What do you mean by seasonal fruits and vegetables?**

Ans: Different fruits and vegetables are grown at different season of the year are called seasonal fruits and vegetables. For examples- mango is a seasonal fruit, while cauliflower is a seasonal vegetables.

4. **Describe the test to detect the presence of carbohydrates in our food.**

Ans: Page no. 21 (Activity 1)

5. **Why are minerals essential in our food?**

Ans: Minerals are essential in our food to maintain and maintaining good health.

6. **What is the function of water in the body?**

Ans: Water is required in our body to serve different functions. It helps to form body fluids, digestion of food and transfer of nutrients within our body removing waste materials from the body, cellular functions, body circulations, etc, and in regulation of body temperature.

**D. Long type questions:**

1. **What should you do to maintain your health? What kind of food should we eat?**

Ans: To maintain our health, we should do the following things as a habit:

1. Take meals regularly
2. Avoid fried and roasted food
3. Do regular exercise
4. Take proper rest and sleep
5. Eat enough salad, fruits and green leafy vegetables
6. Drink enough water.

**2. What are deficiency diseases? Give any two examples.**

Ans: The diseases that are caused due to deficiency of one or more nutrients in our body are called deficiency diseases. Beri-beri is a disease caused due to deficiency of vitamin, while Gaiter is a disease caused due to deficiency of iodine.

**3. Name any four vitamins and write their important functions.**

Ans: The four kinds of vitamins are vitamin A, B, C and D. The importance of these Vitamins are as below.

1. Vitamin A: It helps to maintain healthy skin and fight infections. It is also important to keep off eye diseases.:
2. Vitamin B: It helps the body to break down carbohydrates, and also helps the nervous system to function well. In its deficiency, the body experience pain and numbness, and also tingling sensation in fingers and toes.
3. Vitamin C: It helps the body to absorb iron, and also keep gums and skin healthy. It is also important to keep off skin diseases and loose teeth.
4. Vitamin D: It helps to keep bones and teeth healthy. It also helps the body to absorb calcium.

### CHAPTER-3

**A. Choose the correct answer.**

- 1) B      2) B      3) B                      4) A                      5) C                      6) A

**B. Tick marks the correct sentences and cross mark the incorrect ones.**

- 1) F      2) F      3) T      4) F      5) T      6) T      7) T  
8) F      9) F

**C. Very short type's questions:**

**1. What is mixture?**

Ans: Mixtures can be classified into homogeneous and heterogeneous.

**2. What is homogeneous mixture?**

Ans: A homogeneous mixture is that which has a uniform composition throughout.

**3. What is heterogeneous mixture?**

Ans: A heterogeneous mixture is that in which the composition is not uniform.

**5. Why is there a need for separating components of a mixture?**

Ans: There is a need for separating components of a mixture to remove any harmful or undesirable constituent, to obtain a pure sample of a substance and to obtain useful constituents.

**2. Name the methods for separating the following mixtures.**

**a. Wheat and husk.**

Ans: Winnowing

**b. Iron filing and saw dust.**

Ans: Magnetic separation.

**c. Chalk powder and vitriol (neela thotha)**

Ans: Crystallization.

**d. Common salt, sand and iron filings.**

Ans: Magnetic separation.

### **C. Short type questions.**

**3. What are the properties of a pure substance?**

Ans: The properties of a pure substance are:

It cannot be separated into two or more substances by physical or mechanical means, it is homogeneous, it has definite characteristic, it has definite chemical composition.

**2. What do you mean by crystallization?**

Ans: Crystallization is a process used to get a pure sample of soluble solid substance from the solution.

**3. Explain the method of centrifugation?**

Ans: The method of centrifugation is used to separate the particles suspended in a liquid. Let us take a mixture of water and clay in two tubes and place them in a hand centrifuge machine. When we rotate the machine at high speed, the suspended clay particles will settle down at the bottom of the test tubes.

**4. What do you mean by winnowing method?**

Ans: Winnowing is a method used by the farmers to separate wheat grains from husk and hay with the help of wind.

**5. Distinguish between pure substances and mixtures.**

Ans: A pure substance is that which is made up of same kind of atoms or molecules, while mixture is an impure substance where the constituents may be elements, compounds, or both.

**6. Name three magnetic substances.**

Ans: The three magnetic substances are iron, nickel and cobalt.

**7. Differentiate the following**

**a. Filtration and decantation.**

Ans: Filtration is the process of separating insoluble solid from the liquids by using a filter, while decantation is the process of transferring clear liquid, after sedimentation, without disturbing the sediment.

**b. Decantation and loading:**

Ans: The process of transforming clean liquid, after sedimentation, without disturbing the sediment is called decantation. On the other hand, loading is the process of increasing the rate of sedimentation in a suspension by adding some chemical to it.

**c. Hand picking and winnowing:**

Ans: Hand picking is the simplest method of separating unwanted materials from the useful ones. While winnowing is the process of separation of grain from husk and hay with the help of wind.

**8. What is loading method?**

Ans: During sedimentation, the heavier particles settle down quickly, while the fine particles of clay settle down very slowly. The finer particles can be made to settle faster by dissolving a small quantity of alum in water. The method is called loading.

**9. What do you mean by evaporation?**

Ans: Evaporation is the process of converting a liquid into its vapour by heating it below the boiling point of the liquid.

**5. Mention the methods that can be useful for separation of the following mixtures:**

**a. Sand, sugar and iron filing.**

Ans: Magnetic separation.

**b. Rice, slat and iron filing.**

Ans: Magnetic separation.

**c. Sand, black gram and husk.**

Ans: Sieving.

**d. Sand, camphor and iron filing.**

Ans: Sublimation.

**e. Wheat, sugar and husk.**

Ans: Winnowing.

**D. Long type questions.**

**1. Describe the process of sedimentation and decantation.**

Ans: The process of sedimentation and decantation is used for all those mixtures in which one component is insoluble in the solvent.

Let us take a mixture of sand and water in a beaker and allow them to remain undisturbed for some time. The sand particles start settling down at the bottom of the beaker forming sediment. The process of settling down heavier insoluble particles from a mixture is called sedimentation. On the other hand the process of transforming the clean liquid after sedimentation is called decantation.

**2. Draw a labelled diagram of the setup of filtration.**

Ans: Page no. 40 (activity 4)

**3. How is common salt obtained from sea water?**

Ans: We can obtain common salt from sea water in the following ways:

1. First, we collect sea water in open shallow beds at high tide.
2. When the water is kept exposed to the sun it evaporates leaving behind the salt.

**4. Explain the process of distillation. How is distillation used in separating the constituents of a mixture?**

Ans: The process in which evaporation and condensation go side by side is called distillation.

Distillation is used in separating the constituents of a mixture if the two liquids in a mixture are miscible and there is a difference of 15°C to 20°C in the boiling points.

**5. Explain how will you separate a mixture of oil and water.**

Ans: Let us understand the following activity. Take a mixture of oil and water and stir them well. After setting up a separating funnel, we place an empty beaker below the funnel and then close the tap of the funnel. We then pour the mixture in the funnel and allow it to stand for 10 minutes. The oil forms a separate layer above water. Then gently open the tap to allow the water to trickle out into the beaker. When all the water drains out, close the tap and pour out the oil left in the separating funnel into another beaker. This is how we can separate a mixture of oil and water.

**6. When is the method of evaporation used for separation?**

Ans: The method of evaporation is used for separating common salt dissolved in water.

## CHAPTER- 4

**A. Multiple choice questions:**

**1. Choose the correct answer.**

- 1)A 2)C 3)D 4)C 5)B 6)A

**2. Fill in the blanks.**

1. Nile and Indus.
2. Ancient.
3. Spinning and weaving.
4. Seeds and soft fibres.
5. Charkha.
6. Cheapest.
7. Cotton pad.
8. Nylon and polyester.

**3. Read the following statements and tick mark the true sentence and cross mark the false ones.**

- 1)F                      2)F                      3)T                      4)F                      5)F                      6)F

**B. Very short type questions.**

**1. What is fiber?**

Ans: Fiber means the raw materials created from natural materials or by chemical processes to make clothes.

**2. Name some natural and synthetic cloth materials.**

Ans: Some of the natural cloth materials are cotton, linen and jute, which are plant fibers, while silk and wool are animal fibers. Some of the synthetic cloth materials are nylon and polyester.

**3. Name two items that are made from jute fiber.**

Ans: Two items that are made from jute fiber are gunny bags and carpets.

**C. Short type questions.**

**1. Write the uses of cotton.**

Ans: Cotton is used to make t-shirt, towels, suits, jeans, socks etc. The pads of cotton are used in hospitals and also in factories for cleaning machines. Cotton is also used as filler in mattresses and pillows.

**2. How is jute obtained from the jute plant?**

Ans: Jute is obtained from the bark of the jute plants. It is grown a few months before the rainy season and flower occurs in 3-4 months after sowing. At the flowering stage good quantity of jute can be obtained. The fiber of jute plants is found inside its stem. When its stem becomes very hard, they are cut and tied into small bundles. At this stage, it needs lots of stagnant water and then after a few days, its skin is separated from the stem, the jute is then ready to be spun.

**3. What type of cloth should be wear in kitchen cotton or polyester? Why?**

Ans: In the kitchen clothes made of cotton should be worn. Cotton is a natural fiber and less prone to catch fire, but polyester is a synthetic fiber made from various types of chemicals, including acids and petroleum. As polyester is much prone to catch fire it is dangerous to wear inside kitchen.

**4. How is weaving different from knitting?**

Ans: Weaving is a process in which two types of thread are interweave together to form a cloth, while in knitting single thread is used to work with connected loops from a series of yarns.

**D. Long type Questions.**

**1. How is cotton cloth made?**

Ans: The making of cotton fibers involves a few stages. The raw cotton from bales is cleaned from the straw and dried leaves in the factories. The cleaned cotton is converted into long thread like strands to make this strand into yarn or thread like enough for weaving, the raw materials are spun together to make the yarn or thread with the help of machine. After that fabric is prepared by weaving yarns on looms.

**2. Describe the history of the beginning of the cloth.**

Ans: Man learnt to make clothes after the invention of the wheel, which he used for spinning and finally led to weaving. Once weaving was known, man used cotton and wool to make cloth and started weaving clothes.

**3. What are synthetic fibers? Explain one of them.**

Ans: Synthetic fibers are materials obtained from chemicals, used to make cloth. They are made from various types of chemicals including acids and petroleum. Polyester is a kind of synthetic, polymers produce chiefly by reaction of dibasic acids with dihydric alcohols and used primarily as light, strong, weather resistant resins in boat hulls, textile fibers, adhesives and molded parts. It is a wrinkle-resistant fiber of fiber made from resins.

## CHAPTER- 5

**A. Multiple choice questions:**

**1. Choose the correct answer.**

1) A      2) B      3) C      4) B      5) A

**2. Match the statements in column A with those in column B.**

1) d      2) c      3) b      4) a

**3. Write true or false for the given statements.**

1)T      2)T      3)F      4)T      5)T

**B. Very short type questions.**

**4. Name four substances which have (1) Luster (2) No luster.**

Ans: (1) The four substances that have luster are gold, silver, steel and nickel.  
(2) The four substances that do not have luster are wood, brick, paper and coal.

**5. Name the hardest and the softest substance occurring in nature.**

Ans: The hardest substance occurring in nature is diamond and the softest substance occurring in nature is talcum.

**3. What do you understand by materials?**

Ans: Materials are things that can be used in various ways to make different kinds of objects.

**4. Name two objects that can be made using different materials.**

Ans: Two objects that can be made using different materials are soap and computer.

**5. Name any four materials that can be used to make books.**

Ans: Four materials that can be used to make books are paper, ink, binding gum and stitching pins.

**C. Short type questions.**

8. **Good Conductors:** b, e, f, h    **Bad conductors:** a, c, d, g.

9. **Transparent:** a, e.    **Opaque:** b, d, f.

6. **Magnetic:** a, d, f. **Non-magnetic:** b, c, e.

**D. Long type questions:**

**2. What are the important properties of a material?**

Ans: The important properties of materials are luster, softness and hardness, and solubility in water.

**3. How will you determine hardness of some given substances?**

Ans: We can determine the hardness of some given substances when the surfaces of two different materials are rubbed against each other. The surface which scratches is said to be hard and this property is called hardness of the material.

**3. Define classification. What are the advantages of classification or grouping?**

Ans: Classification is the process of systematically dividing materials into groups in such a way that the members of each group have common properties.

The advantages of classification are as follows.

3. It helps to understand similarities and dissimilarities of objects.

4. It helps to identify objects.

5. It helps to locate things.

6. It makes the study of different things easy.

## CHAPTER-6

**A. Multiple choice questions.**

**1. Choose the correct answer.**

1) c      2) a      3) b      4) d      5) d

**4. Fill in the blanks.**

6. Liquid.

7. Vaporization.

8. Nature.

9. Reversible.

10. Irreversible.

**3. Match the following.**

1) b      2) c      3) e      4) a      5) d

**B. Very short type questions:**

**1. Give two examples of slow changes which may take several years.**

Ans: Growing up a small banyan plant into a huge tree and change in climate of a place due to various gradual environmental degradation.

**2. State two factors which affect the solubility.**

Ans: Two factors that affect the solubility are heating and stirring.

**10. Give two examples each of reversible and irreversible changes.**

Ans: **Two examples of reversible changes are.**

1. When water is boiled it changes into steam and when it cools, it changes back into water.
2. When bulb is switched on, it begins to glow and when it is switch off, it stops glowing.

**Two examples of irreversible changes are.**

1. When coal is burnt, it turns into ash which cannot be converted back into coal.
2. When milk is changed into curd, it cannot be again reverted back into milk.

**C. Short type questions.**

**1. What is the difference between a physical change and a chemical change?**

Ans: The difference between physical change and chemical change is that in physical change, no new substances is formed, while in chemical change, new substances with different molecules are formed.

**2. Give an example to show that undesirable changes are often associated with desirable changes.**

Ans: When some objects are heated they get hot and begin to burn this is desirable but it also produces smoke and pollutes the environment. Thus it becomes undesirable change.

**7. When two substances are brought in contact there may be a physical or a chemical change depending on the conditions. Give two examples to prove this statement.**

Ans: When you heat milk or water for few seconds, milk or water simply gets hot. Take a piece of paper and hold it with a plucker, keep it over the flame of a burning candle. The piece of paper catches fire and burn to leave ash behind.

**4. Classify the following into reversible or irreversible changes.**

- Ans.
- a. Evaporation of water: Reversible change.
  - b. Cutting of trees: Irreversible change.
  - c. Melting of ice: Reversible change.
  - d. Rotten of fruits: Irreversible change.
  - e. Cooking of food: Irreversible change.
  - f. Falling of leaves: Irreversible change.

**D. Long type questions.**

**7. What do you understand by reversible and irreversible change? Explain by giving one example of each case.**

Ans: A reversible change is a change that can be undone or reversed. A reversible change might change the way a material looks or feels, but it doesn't create new materials. Melting and freezing of ice is an example of a reversible change, while change which cannot be reversed e.g burn coal.

**2. "Curdling milk is a change ". Explain what changes does this process involve.**

Ans: Once milk is changed into curd or cheese, we cannot reverse curd or cheese onto milk. This change is irreversible.

**3. Write short notes on the following:**

**a. Physical change:** These are some of changes that occur in day-to-day life. The changes can bring about different kinds of alterations in the things around us. These changes are temporary in nature and can be reversed. So a change in which new substance is formed are physical changes. For example boiling of water and melting of ice.

**b. Chemical change:** Most changes that cannot be reversed are chemical reactions where a new material is formed, and it is not possible or extremely difficult to recover the original materials. Changes that take place in cooking, heating, mixing, etc in some materials are chemical changes reactions. An irreversible change starts off with one material and end up into a new one.

## CHAPTER: 12

**A. Multiple Choice questions**

**1. Choose the correct answer and put a tick (✓) mark in the book.**

(1) D                      (2) A                      (3) C                      (4) D                      (5) C                      (6) All.

**Fill in the blanks:**

- 1) Linear
- 2) Periodic
- 3) Rotatory
- 4) Periodic motion
- 5) Oscillatory

**III. Write 'T' for true or 'F' for false in the given statements.**

1) F                      2) F                      3) T                      4) T

**IV. Match the columns.**

1) E                      2) B                      3) C                      4) F                      5) A                      6) D

**B. Very short type questions.**

**1. Give two example of each.**

1. Rectilinear motion: March of soldiers in a parade, Bullet fired from a gun.
2. Oscillatory motion: A swing, a pendulum of clock.
3. Periodic motion: Rotation of the earth, revolution of the earth.
4. Non-uniform motion: Applying of brakes in a moving vehicle, rolling down of a ball. A car moving along a curved path, whirling of a stone tied to a string.
5. Curvilinear motion: A car moving along a curved path, whirling of a stone tied to a string.

**2. Name the type of motion which the wheels of a moving scooter show.**

Ans: The wheels of a moving scooter show linear motion.

**3. Name the two types of motion made by the earth.**

Ans: The two types of motion made by the earth are periodic motion and rotatory motion.

**C. Short type questions.**

**1. What is motion?**

Ans: A natural event that involves a change in the position or location of something is called motion.

**2. State the kinds of motions.**

Ans: The different kinds of motions are translator motion, rotatory or circular motion, periodic motion, non-periodic motion and oscillatory motion.

**3. What do you mean by linear motion?**

Ans: Linear motion means the movement of a body along a straight line. Examples of such motions are motion of a vehicle, march of a soldier in a parade, bullet fired from a gun, etc.

**4. When is a body said to be at rest?**

Ans: A body is said to be at rest when there is no change in its position with time.

**5. Define curvilinear motion.**

Ans: The movement of a body along a curved path is called curvilinear motion.

**D. Long type questions.**

**1. Classify the following into different types of motion:**

- I. The motion of the hands of a clock: Curvilinear motion.
- II. The motion of the falling fruit: Linear motion.
- III. The motion of the strings of a violin: Linear motion.
- IV. The motion of a cyclist on a straight leveled road: Linear motion.
- V. A car moving on a curved path: Curvilinear motion.

**2. Name the different types of translator motions. Explain each in brief.**

Ans: The different types of translatory motion are:

1. Linear motion: The movement of a body along a straight line is called linear motion. Example of such movement is bullet fired from a gun.
2. Curvilinear motion: The movement of a body along a curved path is called curvilinear motion. Example of such motion is a car moving along a curved path.

**3. What is rotatory motion? Explain with examples.**

Ans: The motion of a body in which every particle on it moves along a circular path about a fixed axis is called rotatory motion. Examples of such motion are spinning top, movement of a fan's blade, phirki, etc.

## CHAPTER-13

**A. Choose the correct answer.**

- 1) a      2) c      3) a      4) a, b, c

**9. Fill in the blanks:**

1. Current.
2. Electric current.
3. Two.
4. Electric switch.
5. Electric current.

**3. Write "T" for true or "F" for false.**

- 1) T      2) F      3) T      4) F      5) T

**B. Very short type questions:**

**1. What is electric current?**

Ans: The rate of flow of electric charges or electrons along a metal wire is called electric current.

**2. What are the sources of electric current?**

Ans: The sources of electric current are electric cell, battery and solar cell.

**3. Who invented the electric bulb?**

Ans: The famous scientist, Thomas Alva Edison, invented the electric bulb.

**4. What is a dry cell?**

Ans: The electric cell that is normally used in torches and other electric devices is called a dry cell.

**5. Define electric current.**

Ans: The rate of flow of electric charges or electrons along a metal wire is called electric current.

**6. List the names of any four insulators.**

Ans: The names of four insulators are rubber, plastic, cotton and paper.

**C. Short type questions.**

**1. What is the difference between a cell and a battery?**

Ans: A cell is an agent that produces electricity by chemical reactions taking place in the chemicals that are placed inside the cell's body. But a battery is a collection of two or more cells that are joined together to produce electricity.

**2. Distinguish between good conductors and bad conductors.**

Ans: Good conductors are those which allow electric current to pass through them. Examples: copper, silver, gold, iron, aluminum, acid, charcoal, etc. On the other hand, materials which do not allow electric current to pass through them are called bad conductors. Examples: rubber, plastic, mica, paper, wood, glass, etc.

**3. What are the uses of a solar cell?**

Ans: Solar cells are used in transistors, calculators, watches, space satellites, solar heaters, solar furnaces, etc.

**4. Differentiate between open and closed circuits.**

Ans: A closed circuit is one in which when we join the two terminals of a cell to a bulb through wires, the electric current starts flowing from the negative terminal through the bulb to the positive terminal and re-enters the cell. But if any one of the terminals gets disconnected from the bulb, it is said to be an open circuit. In an open circuit, current does not flow and the bulb does not light up.

**D. Long type questions:**

**1. What is a switch? How can you make a switch?**

Ans: A device by which an electric circuit can be easily completed or broken is called a switch. We can make a switch in a few simple steps. Let us take one thumb tack and use it to pin one bare end of the plastic-coated copper wire tightly. Then pass the loop at the end of the safety pin through the thumb tack. Now let us fix the thumb tack in the piece of soft wood tightly, such that the safety pin can just turn around. Let us then take the other thumb tack and pin the other end of the plastic-coated copper wire tightly. Fix this thumb tack in the wooden board in such a way that the safety pin can easily make contact with it. Thus, we have made the switch and it is ready for use.

**2. Draw the diagram of an electric bulb and label it. How does an electric bulb glow?**

Ans: The electric bulb is made of transparent glass, inside which lies the filament which is supported by two thick wires. One of the thick wires is connected to the metal casing around the base of the bulb, and the other wire is connected to the tip of the base. The base of the bulb, which are fixed in such a way that they do not touch each other. When the bulb is connected with conducting wires and are connected to the electric cells, the bulb glows.  
Diagram page no. 152.

**3. Draw the diagram of an open and closed circuit and explain.**

Ans: *Diagram page no. 155 (A) open and (B) closed circuit.*

A closed circuit is one in which when join the two terminals of a cell to a bulb through wires, the electric current starts flowing. It traces a path for the electrons to start flowing from the negative terminal through the bulb to the positive terminal and re-enter the cell. But if any one of the terminals get disconnected from the bulb, it is said to be an open circuit. In an open circuit, current does not flow and the bulb does not light up.

**4. Explain the parts of a torch and its working.**

Ans: A torch contains the following parts: a metallic or plastic casing, torch bulb, glass reflector, metal switch contacts, slide switch, two or three dry cells, metal spring attached to the slide switch and lamp contact. A torch works through the mechanism of a closed circuit. When the slider switch of the torch is slided forward, the cell contact is complete with the bulb and the circuit gets closed. Electric current starts from one terminal of the electric cell and comes back to the other terminal of the cell. Thus the bulb glows and starts emitting light from the torch.

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