SHIVALIK PUBLIC SCHOOL

PRACTICE WORKSHEETS (Chapter 1-11)

SUBJECT - SCIENCE

WORKSHEET -1

CHAPTER- Components of Food

COMPETENCY BASED QUESTIONS

ASSERTION REASONING:

Following questions consist of two statements –Assertion (A) and Reason (R).

Answer these questions selecting the appropriate option given below:

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true but R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true

Q1 Assertion: A balanced diet makes us healthy.

Reason: A balanced diet contains all the components of food in right proportion.

Q2 Assertion: Food containing proteins are called body-building food.

Reason: Paneer is a plant source of protein.

Q3 Assertion: Deficiency of calcium causes rickets.

Reason: In our diet, milk and milk products are the source of calcium.

Q4 Assertion: Obesity is generally caused by eating too much and moving too little.

Reason: The extra food gets stored as fat and the person becomes too fat.

Q5 While using iodine in the laboratory, some drops of iodine fell on Paheli's socks and some fell on her teacher's saree. The drops of iodine on the saree turned blue-black while their colour did not change on Paheli's socks. What can be the possible reason?

Q6 The letters of alphabets such as A,B,C,D,E and K are used to represent a particular group of food nutrients. These nutrients are needed by our body in very small quantities

but their presence is essential in our food.

6.1 Which nutrients do the above given letters represent?

6.2 Choose the letter which represents the nutrient that is formed in our body when the skin is exposed to sunlight.

6.3 Choose the letter which represents the nutrient present in oranges.

6.4 Choose the letter which represents the nutrient necessary for good eyesight.

Q7 Water does not provide nutrients, yet it is an important component of food.Why?

Q8 Do you think that people of all ages need the same type of diet ?

Q9 Should the diet of a person working in an office on computer different from construction labour?

MULTIPLE CHOICE QUESTIONS:

Q10 Which of the given food items are energy giving food?

i) Wheat ii) Ghee iii) Iodised salt iv) Spinach

a) (i)and (iv) b) (ii) and (iv) c) (i) and (ii) d) (iii) and (iv)

Q11 Sarthak advised his mother not to sieve wheat flour before making dough because:

a) It Contains protein
b) It Contains roughage which helps in digestion
c) It Contains fat
d) It Contains Vitamins

Q12 Boojho was having difficulties in seeing things in dim light. The doctor tested his eyesight and prescribed vitamin A supplement. Which deficiency disease is he suffering from?

a) Loss of vision b) Cataract c) Scurvy d) Beriberi

Q13 Paheli avoided eating vegetables but liked to eat biscuits, noodles and white bread. She frequently complained of stomach ache and constipation. Which food items should

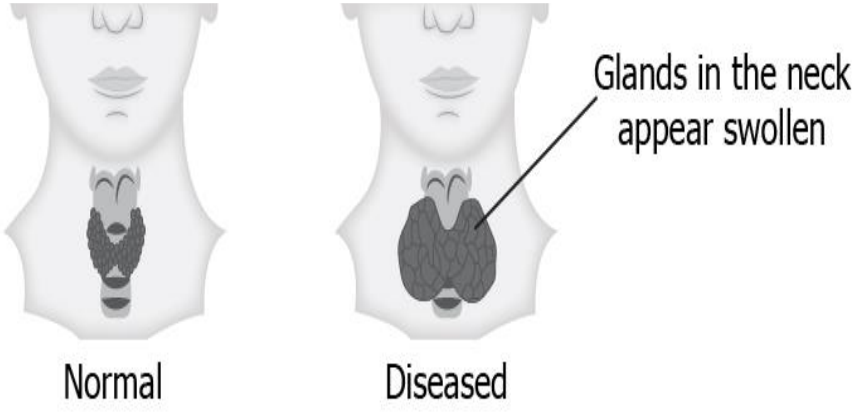
be included in her diet to get rid of the problem?

a) Milk and meat
b) Pulses and paneer
c) Dietary fibres or roughage
d) Eggs and liver

Q14 Modernisation has led to the development of life style disorder. Which of the following disease is caused due to lifestyle disorder?

a) Obesity and heart disease
b) Lack of Vision and Goitre
c) Bone decay and rickets
d) Anaemia

Q15 The image shows a common symptom of a nutrient deficiency.



Deficiency of which nutrient is responsible for this bodily condition?

(a)Iodine; it results in goitre

(b)Iron; it results in anaemia

(c)Vitamin C; it results in scurvy

(d)Vitamin B1; it results in beriberi

Answer Key (WORKSHEET -1)

CHAPTER- (Components of food)

A1-(a) Both A and R are true and R is the correct explanation of A.

A2-(c) A is true but R is false.

A3-(b) Both A and R are true but R is not the correct explanation of A.

A4-(a) Both A and R are true and R is the correct explanation of A.

A5 -The drops of iodine are used to detect the presence of starch in the food item. The possible reason for appearance of blue-black colour on teacher's saree is due to the presence of starch. The saree would have been starched. Paheli's socks did not have starch on it, thereby their colour did not change.

A6.1- Vitamins. A6.2- Vitamin D

A6.3- Vitamin C A6.4- Vitamin A

A7- Water is an important component because it helps to transport digested food to body cells, to absorb nutrients from the food, to get rid of waste products from the body and to control and regulate the body temperature.

A8- A child and a grown up man are of different age. So the diet of a growing child should contain more of protein rich foods than the diet of a grown up man.

A9-Different jobs involve different amount of work. A man doing hard physical work needs more carbohydrates in his diet to get extra energy than another man doing office work.

MULTIPLE CHOICE QUESTIONS:

A10- c) (i) and (ii)

A11- b)It Contains roughage which helps in digestion

A12- a)- Loss of vision

A13- c) Dietary fibres or roughage

A14- a)Obesity and heart disease

A15- (a)Iodine; it results in goitre

WORKSHEET -2

CHAPTER- Sorting Materials into Groups

Competency Based Questions

Multiple Choice Questions: -

1 Students were asked to examine different materials and substances. These were, butter paper, aluminium foil, cardboard, white cotton cloth, frosted glass and water. Which of the following is a correct observation?

a) Only cardboard is opaque

b) Only water is transparent

c) Butter paper and water are translucent

d) Aluminium foil, frosted glass and cotton cloth are opaque

2 An empty metallic bottle, glass bottle and plastic bottle, each of same size were lowered by applying similar force, into a bucket filled with water. What will happen when the force is removed

a) Metal bottle will float upwards and the others will stay at the bottom

b) Plastic bottle will float upwards and the others will stay at the bottom

c) Glass bottle will float upwards and the others will stay at the bottom

d) All three kinds of bottles will slowly begin to float upwards

3 A source of light was observed, through three sheets of paper. These were,

Sheet 1: Butter paper

Sheet 2: White tissue paper

Sheet 3: Paper painted with black acrylic paint.

Which of the following is a correct statement regarding these sheets of paper?

a) 1 is translucent, 2 is transparent and 3 is opaque

b) 1is transparent while 2 and 3 are translucent

c) 1 is translucent while 2 and 3 are opaque

d) 1 and 2 are translucent while 3 is opaque

4 A stone, a small piece of wood and a metallic coin of the same weight were dropped in a bucket of water. Which of these would sink or float?

a) The stone would sink, while the wood and coin would float

b) The wood and stone would sink, while the coin would float

c) The stone and coin would sink, while wood would float

d) The stone, coin and wood, would all sink down

5. A spoonful each, of sawdust, powdered sugar and salt were added to a glass containing water. Which of the following can be observed?

a) Salt and sawdust are soluble in water, but sugar is insoluble

b) Salt and sugar are soluble in water, but sawdust is insoluble

c) Sugar and sawdust are soluble in water, but salt is insoluble

d) Sugar, sawdust and salt are all soluble in water

6 A person says that a kitchen sponge is harder than a lump of cotton and a plastic bottle is softer than a ceramic bottle. On examining these materials, what can be correctly said, about them?

a) It is easier to break plastic bottles than to break ceramic bottles

b) It is easier to compress cotton than to compress a kitchen sponge

c) It is easier to stretch ceramic bottles than to stretch plastic bottles

d) It is easier to tear up a kitchen sponge than to tear up a lump of cotton.

Assertion-Reasoning

Directions: Each of the following questions contains an assertion followed by a reason. Read them carefully and answer the questions on the basis of the following options.

a) Both assertion and reason are true and the reason is the correct explanation of assertion.

b) Both assertion and reason are true but the reason is not the correct explanation of the assertion.

c) Assertion is true and the reason is false.

d) Assertion is false and the reason is true

(1) Assertion – Some materials are soluble in water whereas some others are in soluble

Reason- Different types of materials have different properties.

(2) Assertion – Materials through which objects can be seen but not clearly are known as
materials translucent.

Reason – The oily patch on paper are the translucent**.**

(3) Assertion – Materials which can be compressed or scratched easily are called soft.

Reason – Material which can difficult to compress are called hard.

(4) Assertion – Materials which can be compressed or scratched easily are called soft.

Reason- Materials which cannot be compressed or scratched easily are called hard

(5) Assertion – Some substances completely disappeared or dissolved in water

Reason- Glass, water, air and some plastics are examples of translucent materials.

(6) Assertion – Glass, water, air and some plastics are examples of transparent materials.

Reason- The materials through which objects can be seen, but not clearly, are known as translucent.

Case Study: -

A) Materials usually look different from each other. Wood looks very different from iron. Iron appears different from copper or aluminium. At the same time, there may be some similarities between iron, copper and aluminium that are

not there in wood. Some of them may be hard to compress while others can be easily compressed, while some cannot be scratched so easily. In appearance, materials can have different properties, like lustre, be rough or smooth.

Answer the following questions: -

1. Name some of the properties of materials other than mentioned above.
2. Define hard and soft materials. Give example of each.
3. State whether the statements given below are True or False.

(i) Stone is transparent, while glass is opaque.

(ii) A notebook has lustre while eraser does not.

(iii) Chalk dissolves in water.

(iv) A piece of wood floats on water

4. Select those objects from the following which shine:

Glass bowl, plastic toy, steel spoon, cotton shirt

B) You might have played the game of hide and seek. Think of some places where you would like to hide so that you are not seen by others. Why did you choose those places? Would you have tried to hide behind a glass window? Obviously not, as your friends can see through that and spot you. Shopkeepers usually prefer to keep biscuits, sweets and other eatables in transparent containers of glass or plastic, so that buyers can easily see these items. Paheli suggests covering the glass of a torch with your palm at a dark place. Switch on the torch and observe the other side of the palm. She wants to know whether palm of your hand is opaque, transparent or translucent?

Answer the following questions: -

1. Write the difference between transparent, translucent and opaque materials.
2. What is the nature of our palm when it covers the torch

a) Transparent

b) Opaque

3. Why did the shopkeeper use transparent containers instead of translucent ones?

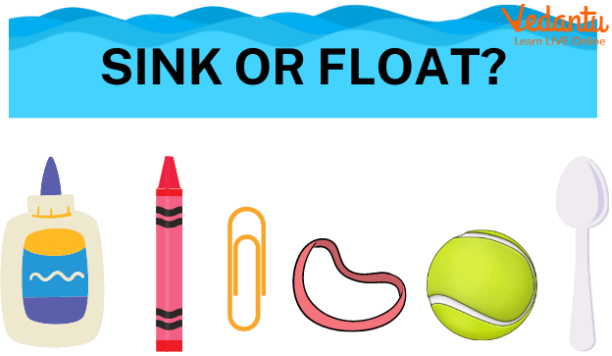
C) We learnt that materials differ in their appearance and the way they mix in

water or other liquids. They may float or sink in water or may be transparent, opaque or translucent. Dried leaves fallen on the surface of a pond, a stone that you throw into this pond, few drops of honey that you let fall into a glass of water. What happens to all of these? They may float or sink in water.

Answer the following questions: -

1. Dried leaves will float while stone will sink in water. Why?

2. In the picture given below classify the following materials as materials floating and sinking in water



3. Name a property through which material can be differentiated according to their appearance.

(WORKSHEET -2) Answer Key

CHAPTER- SORTING MATERIALS INTO GROUPS

M.C.Q.

1. b	2. b	3. d	4. b	5. b	6. b

Assertion Reasoning

1. a	2. a	3. b	4. b	5. c	6. b

Case Study

A. 1. Soluble or Insoluble

Objects may float or sink in water.

Transparency.

Attraction towards a magnet.

2. Hard materials are materials that cannot be easily crushed, chopped, deformed, or scraped. Iron and glass are two examples. Soft materials are those that can be crushed, sliced, bent, or scraped with ease e.g., Cotton, sponge.

3. i. F

ii. F

iii. F

iv. T

4. Glass bowl, Steel spoon.

B) 1. Those objects through which light can pass easily are called <u>transparent objects</u> e.g. water, glass.

Those objects through which light can pass partially are called <u>translucent objects</u> e.g. tracing paper, waxed paper.

An object which do not allow the light to pass through are called <u>opaque object</u> e.g. wood, stone.

2. Opaque.

3. Shopkeepers usually prefer to keep biscuits, sweets and other eatables in transparent containers of glass or plastic, so that buyers can easily see these items.

C) 1. Leaf of a plant floats on the water because the density of leaf is less than the density of water. A stone thrown in water sinks because the density of stone is more than the density of water.

2. Plastic spoon, Ball, Rubber band- floats on water

Glue, paper pin, crayon- sink in water

3. Lustre.

Worksheet -3

CHAPTER - Separation of substances

Competency based questions

M.C.Q's

1. Paheli bought some vegetables such as french beans, lady's finger, green chillies, brinjals and potatoes all mixed in a bag. Which of the following methods of separation would be most appropriate for her to separate them?

(a) Winnowing

(b) Sieving

(c) Threshing

(d) Hand picking

2. Boojho's grandmother is suffering from diabetes. Her doctor advised her to take 'Lassi' with less fat content. Which of the following methods would be most appropriate for Boojho to prepare it?

(a) Filtration

(b) Decantation

(c) Churning

(d) Winnowing

3. Which of the following mixtures would you be able to separate using the method of filtration?

(a) Oil in water

(b) Cornflakes in milk

(c) Salt in water

(d) Sugar in milk

4. Fill in the blanks with appropriate words:

(i) Small pieces of stone can be removed from rice by _____.

(ii) _____ are obtained from stalks by threshing.

(iii) Husk from wheat flour is generally removed by_____.

(iv) The process of settling of heavier particles is called _____.

(v) Filtration is helpful in separating an insoluble _____ from a _____.

5. State whether the following statements are true or false.

(a) A mixture of oil and water can be separated by filtration.

(b) Water can be separated from salt by evaporation.

(c) A mixture of wheat grains and wheat flour can be separated by sieving.

(d) A mixture of iron filings and rice flour can be separated by magnet.

(e) A mixture of wheat grains and rice flakes can be separated by winnowing.

6. Match the mixtures in Column I with their method of separation in Column II.

(a) Oil mixed in water	(i) Sieving
(b) Iron powder mixed with flour	(ii) Hand picking
(c) Salt mixed with water	(iii) Decantation
(d) Lady's finger mixed with french beans	(iv) Magnet
(e) Rice flour mixed with kidney beans	(v) Evaporation

Answer key (Worksheet -3)

CHAPTER - SEPARATION OF SUBSTANCES

MULTIPLE CHOICE QUESTIONS

1. d

2. c

3. b

4. (i) hand picking; (ii) grains; (iii) sieving; (iv) sedimentation;

(v) solid, liquid.

5. a) False

(b) True

(c) True

(d) True

(e) True

6. a) – (iii)

(b) – (iv)

(c) – (v)

(d) – (ii)

(e) – (i)

WORKSHEET -4

CHAPTER- (GETTING TO KNOW PLANTS)

COMPETENCY BASED QUESTIONS

A. Multiple Choice Questions:

1. The image shows a watermelon plant.

A student claimed that it an herb. Is the claim made by the student correct?

(a)Yes. The plant has green stems, so it is an herb.

(b)Yes. The plant has many branches, so it is an herb.

(c)No. The plant has weak stems and spreads on the ground, so it is a creeper.

(d)No. The plant has weak stems which are supporting the watermelon on the ground, so it is a climber.

2. A student pulled an herb out of the soil and observed that a plant part came out with it. Some hair-like structures were coming out from that part. What could be the plant part?

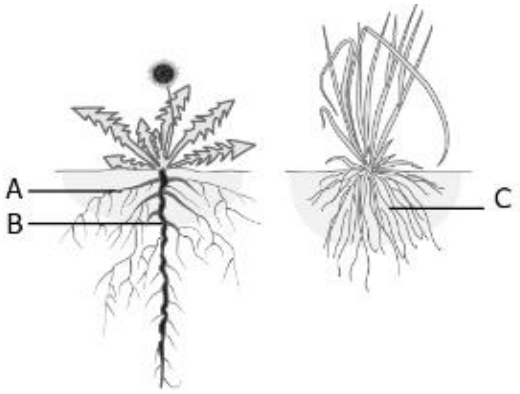
(a)Flower

(b)Leaf

c) Stem

d) Root

3.The image shows two types of the plant with their root system.



Which of the following correctly describes the name of roots that are labelled as A, B, and C?

(a)A-lateral root, B-tap root, C-fibrous root

(b)A-tap root, B-fibrous root, C-lateral root

(c)A-fibrous root, B-lateral root, C-tap root

(d)A-tap root, B-lateral root, C-fibrous root

4. Rishi has a small plant with him. He observed that the root of the plant was having a main root with some smaller roots. What type of the root is possessed by this plant and what type of venation will likely be observed in its leaves?

(a)Tap root; Parallel venation

(b)Tap root; Reticulate venation

(c)Fibrous root; Parallel venation

d)Fibrous root; Reticulate venation

5. A student wants to perform an iodine test to determine the presence of starch in that part of the plant at which photosynthesis takes place. What part of the plant should be chosen by the student to perform the test?

(a)Roots

(b)Leaves

(c)Branches

(d)Petals of flower

6. A student took a leaf from a mango plant and started to take its impression with the help of a pencil and paper. The image shows the impression of the betel leaf.

What likely can be concluded about the venation of the leaf?

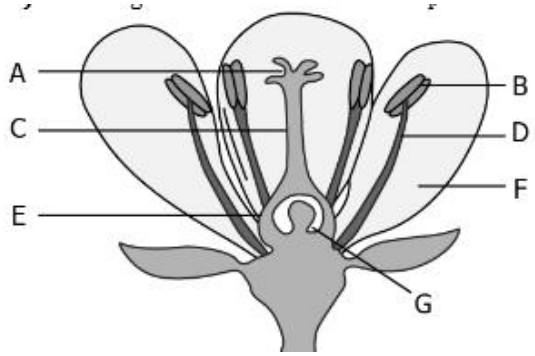
(a)Parallel venation; as the obtained design represents net-like veins.

(b)Parallel venation; as the obtained design represents parallel veins.

(c)Reticulate venation; as the obtained design represents net-like veins.

(d)Reticulate venation; as the obtained design represents parallel veins.

7. The image shows some unlabelled parts of a flower.



B. Assertion-Reasoning Questions:

1. Assertion – Plants are usually grouped into herbs, shrubs and trees.

Reason – The plants are classified on the basis of their height, nature, of stem and branches.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

2. Assertion – Green leaves make their food by the process of photosynthesis.

Reason – Plants used CO_2 and water in the presence of sunlight make their food.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

3. Assertion – There are two types of roots tap root and fibrous.

Reason – Roots absorb water and minerals from the soil.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

4. Assertion – The Parts of a flower are sepals, petals stamen and pistil.

Reason – The stem bears petiole and lamina.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

C. Case Study Questions:

1. Plants can be classified into three categories: herbs, shrubs and trees. Plants with green and tender stems are called herbs. They are usually short and may not have many branches. For example- Tomato. Some plants develop branches near the base of stem. The stem is hard but not very thick. Such plants are called shrubs. For example- lemon. Some plants are very tall and have hard and thick stem. The stems have branches in the upper part, much above the ground. Such plants are called trees. For example- mango. Plants with weak stems that cannot stand upright but spread on the ground are called creeper, while those that take support and climb up are called Climber. These are different from the herbs, shrubs and trees.

1)…… Is an example of herb?

(a) Mango

(b) Tomato

(c) Pumpkin

(d) Lemon

2) Plants that spread on the ground are called Climbers?

(a) True

(b) False

3) Name the plant type, in which the stems have branches in the upper part, much above the ground.

(a) Shrubs

(b) Climbers

(c) Trees

(d) Creepers

4) What kind of plants are called Creepers?

5) Briefly explain with an example, what do you mean by “shrubs?”

2. The stem of a plant helps in upward movement of water. The water and minerals go to leaves and other plant parts attached to the stem. The part of leaf by which it is attached to the stem is called petiole. The broad, green part of the leaf is called lamina.The lines on the leaf are calledVeins. A prominent line in the middle of theleaf is calledthe midrib. Thedesign made byveins in a leaf iscalled the leaf venation. If this design isNet-like on both sides of midrib**,** thevenation is reticulate. Inthe leaves of grass you might have seen that the veins are parallel to one another. This is parallel venation.

1) The middle line of the leaf is called…….

a) Lamina

b) Petiole

c)Vein

d)Midrib

2)…… is the green part on the leaf?

a) Venation

b) Midrib

c) Petiole

d) Lamina

3) When the veins of Leaves of Grass are parallel to each other. It is called ……?

a) Parallel venation

b) Reticulate venation

c) Midrib

d) None of the above

4) Write the function of stem in plants?

5) Explain Reticulate venation in leaves?

3. Do this activity during day time on a sunny day. Use a healthy, well-watered plant that has been growing in the sun. Enclose a leafy branch of the plant in apolythene cover and tie up its mouth. Tie up the mouth of another empty polythene cover and keep it also in the sun. After a few hours, observe the inner surface of the covers. You'll observe droplets of water inside it.Water comes out of leaves in the formof vapour by a process calledtranspiration. Plants release a lot of waterinto the air through this process. Leaves also have another function, to know that,we would require a leaf, spirit, a beaker, test tube, burner, water, a watch glass and iodine solution for this activity. Take a leaf in a test tube and pour spirit to completely immerse the leaf. Now, place the test tube in a beaker half filled with water. Heat the beaker till all the green colour from the leaf comes out into the spirit in the test tube. Take out the leaf carefully and wash it in water. Place it on a watch glass and pour some Iodine solution over it. You'll observe that it has turned blue black, showing the presence of Starch in it.For instance, a slice of raw potato also shows the presence of starch. Potatoes get this starch from their leaves and store it. Leaves prepare their food in the presence of sunlight and a green coloured substance present in them. For this, they also use water and carbon dioxide. This process is called photosynthesis. Oxygen is given out in this process. The food prepared by leaves ultimately gets stored in different parts of plant.

1) Starch is present in the **.....** of potatoes.

a) Stem

b) Leaves

c) Root

d) Both (b) and (c)

2) Leaves have only one function that is of transpiration.

a) True

b) False

3) **.....** is given out during the process of photosynthesis?

a) Carbon dioxide

b) Water

c) Vapour

d) Oxygen

4) Explain the process of transpiration?

Que.5) How do plants prepare food? Mention the process involved?

4. We would require one bud and two fresh flowers each, of any of the following–Datura, china rose, mustard, brinjal, Lady's finger, gulmohur. Also a blade, a glass slide or a sheet of paper, a magnifying glass and water. Observe carefully and look at the prominent parts of the open flower. These are the petals. Different flowers have petals of different colours. The part

that is made of small leaf-like structures, are called Sepals. To see the inner parts of the flower clearly, you have to cut it open, if its petals are joined. For example, in datura and other bell-shaped flowers, the petals have to be cut out so that the inner parts can be seen clearly. Remove the sepals and petals to see the other parts. Study the Fig. 1 and carefully, compare and identify the stamens, anthers and pistil in your flower. The innermost part of flower is called the Pistil.Let us now study the structure of ovary. It is the lowermost and swollen part of the pistil. We will cut this part to study what is inside! Cut the ovary in two different ways to prevent them from drying, put a drop of water on each of the two pieces of the ovary, you have cut. Observe the inner parts of the ovary using a lens. You will see some small bead like structures inside the Ovary. They are called ovules. The number of sepals, petals, stamens and pistils may also be different in different flowers. Some of these parts may even be absent at times!

1) Dhatura is a flower, having joined petals.

a) True

b) False

2) Name the inner most part of the flower?

a) Sepals

b) Pistil

c) Ovary

d) Ovules

3) The small bead like structures inside the ovary is called **.....**.

a)Pistil

b) Ovules

c) Stamens

d) Anthers

Que.4) What are Petals and Sepals in flowers?

Que.5) Define Ovary and how we can study its structure?

Worksheet-4(ANSWER KEY)

CHAPTER - Getting to know plants

A. 1. c)

2. d)

3. c)

4. b)

5. b)

6. c)

7. A-style

B- filament

C-stigma

D-anther

E- ovary

F-petals

G- ovules

B. 1. a)

2. a)

3. b)

4. b)

C. 1.

1. b)

2. b)

3. a)

4. Plants with weak stems that cannot stand upright but spread on the ground are called creeper,

5. Some plants develop branches near the base of stem. The stem is hard but not very thick. Such plants are called shrubs

C 2.

1. c)

2. d)

3. a)

4. The stem of a plant helps in upward movement of water.

5. If this design isNet-like on both sides of midrib, thevenation is reticulate.

C 3.

1. b)

2. b)

3. d)

4. Water comes out of leaves in the form of vapour by a process called transpiration.

5. Plants prepare their food in the presence of water, sunlight, carbon dioxide. The process is called as photosynthesis.

C.4.

1. a)

2. d)

3. b)

4. Petals are the most colourful parts of a flower and sepals are the green leaf like strictures present at the base of the flower

5. The swollen part of the flower present at the base is known as ovary. We can study about it with the help of a lens.

WORKSHEET -5

CHAPTER - (BODY MOVEMENTS)

COMPETENCY BASED QUESTIONS

Q1. ASSERTION REASON QUESTIONS

(1) Assertion- Birds fly in the air and walk on the ground

Reason – Birds fly because their bodies are well suited for flying birds bones are hallow and light.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option A

(2) Assertion – The human skeleton is composed of around 305 bones at birth.

Reason – All the bones in our body also from a frame work to give a shape to our body .

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option B

(3) Assertion –There are some important internal parts of our body lie protected inside this cage..

Reason – The chest bone and the backbone together for a rib caqe which have 12 ribs on each side of the chest

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option A

4)Assertion [A]: Muscles have the capability to move

Reason [R]: It is due to their ability to contract and relax

A [A] is true and [R] is false

B [A] is false and [R] is true

C] Both [A] and [R] are true and [R] explains [A]

D Both [A] and [R] are true and [R] does not explain [A]

ANS The correct option is C. Both [A] and [R] are true and [R] explains [A]

The main function of the muscular system is movement. Muscles are the only tissue in the body that have the ability to contract and therefore, move the other parts of the body. Related to the function of movement is the muscular system's second function, the maintenance of posture and body position.

5) Assertion: Ball and socket joint allows movement in all the directions.

Reason: The round end of one bone fits into the cavity of other bone.

(A)Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(B) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(C) Assertion is true but the Reason is false

(D) The statement of the Assertion is false but the Reason is true.

(E) Both the Assertion and Reason are false

Answer: (A) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

6) Assertion: Fish have fins and tails on their body.

Reason: These help them swim inside water.

(A)Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(B) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(C) Assertion is true but the Reason is false

(D) The statement of the Assertion is false but the Reason is true.

(E) Both the Assertion and Reason are false.

Answer- A) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

Q2. MULTIPLE CHOICE QUESTIONS-

i)The place where cartilage is present in our body is_____.
(a) outer parts of ear
(b) at the end of nose
(c) discs between vertebrae of the backbone
(d) all of the above

ii) The tissue which helps in the movement is called
(a) epithelial tissue
(b) muscular tissue
(c) connective tissue
(d) nervous tissue

iii) Which of the skull bones are movable?
(a) Upper jaw
(b) Teeth
(c) Eye socket
(d) Lower jaw

iv) Which one of the following occurs when we straighten our arm?
(a) Both biceps and triceps contract
(b) Both biceps and triceps relax
(e) Biceps contracts but triceps relaxes
(d) Triceps contracts but biceps relaxes

v) The skeleton of the cockroach is called
(a) muscles
(b) endoskeleton
(c) exoskeleton
(d) skull

vi) The body of snail is covered with
(a) muscles
(b) flaps
(c) hard shell
(d) wings

Q3. CASE STUDY QUESTIONS-

Q.i) We are able to bend or rotate our body in places where two parts of our body seem to be joined together — like elbow, shoulder or neck. These places are called joints. Bones are joined together at these joints. Bones cannot be bent. So, It is not one long Bone from the upper arm to our wrist. It is different bones joined together at the Elbow. Similarly, there are many bones present in each part of the body. We can bend or move our body only at those points where bones meet. There are different types of joints in our body to help us carry out different movements and activities. We will learn about ball and socket movement with the help of an activity. Roll a strip of paper into a cylinder. Make a small hole in an old rubber or plastic ball and stick the cylinder on the ball. Put the ball in a small bowl. Now, imagine that the paper cylinder is your arm and the ball is its end. TheBowl is like the part of the shoulder to which your arm is joined. The roundedEnd of one bone fits into the cavity (hollow space) of the other bone. Such a joint allows movementsIn all directions. The joint where our neck joins the head is a pivotal joint. It allows us to bend our head forward and backward and turn the head to our right or left. Hinges allow only back and forth movement. The elbow has a hinge Joint that allows only a back and forth Movement.

Que. 1) Which joint allows movements in all directions?

(a) Ball and socket

(b) Pivotal joint

(c) Hinge Joint

(d) Both (a) and (c)

Que. 2) The Elbowhas a…… that allows only back and forth Movement.

(a) Pivotal joint

(b) Hinge Joint

(c) Ball and socket

(d) None of the above

Que. 3) The places where bones are joined together are called joints?

(a) True

(b) False

Que. 4) Explain how are we able to bend our Elbow?

Que. 5) What is the function of the Pivotal joint?

Answer Key

Que.1. a) Ball and socket joint

Que. 2. b) Hinge Joint

Que. 3. a) True

Que. 4) Answer: As we know that bones cannot be bend but Elbow is not one long Bone from the upper arm to our wrist. It is different bones joined

together at the Elbow. We can bend or move our body only at those points where bones meet.

Que. 5) Answer: The joint where our neck joins the head is a pivotal joint. It allows us to bend our head forward and backward and turn the head to our right or left.

Q. ii) We cannot move some joints between bones in our head. Such joints are called fixed joints. There is a joint between the upper jaw and the rest of the head which is a fixed joint. All the bones in our body form aframework to give a shape to our body. This framework is called the skeleton. We can have some idea about the shape and number of bones in some parts of our body by feeling them. One way we could know this shape better would be to look at X-Ray images of the human body. Sometimes when we are hurt, or have an accident, doctors use these X-ray images to find out about any possible injuries that might have happened to the bones. The X-Rays show the shapes of the bones in our bodies. Our wrist is flexible because it is made up of several small bones called carples. Take a deep breath and hold it for a little while. Feel your chest bones and the Back bone by gently pressing the middle of the chest and back at the same time. We see that the ribs are curiously bent. They join the chest bone and the backbone together to form a Box. This is called the rib cage. There are 12 ribs on each side of chest. Some important internal parts of our body lie protected inside this cage. Backbone is made up of many small bones called vertebrae. The backbone consists of 33 Vertebrae. The rib cage is joined to these bones.

Que.1) Human wrist is made up of small bones
called …….

a) Vertebrae

b) Rib bones

c) Carples

d) None of the above

Que.2) Our backbone consists
of ……. vertebrae.

a) 24

b) 12

c) 38

d) 33

Que.3) Through X-ray images we can see the shape of the bones?

a) True

b) False

Que.4) What is a Rib cage? Mention its function?

Que.5) Define the term skeleton?

Answer Key

Que.1. c) Carples

Que.2. d) 33

Que.3. a) True

Que.4) Answer: We see that the ribs are curiously bent. They join the chest bone and the backbone together to form a Box. This is called the rib cage. There are 12 ribs on each side of chest. Some important internal parts of our body lie protected inside this cage.

Que.5) Answer: All the bones in our body form a framework to give a shape to our body. This framework is called the skeleton.

Q iii) Two bones on the back are prominent where the shoulders are. They are called Shoulder bones. Observe Fig. 1 carefully. This structure is made of pelvic bones. They enclose the portion of your body below the stomach. This is the part you sit on. The skull is made up of many bones joined together. It encloses and protects a very important part of the body, the brain. There are some additional parts of the skeleton that are not as hard as the bones and which can be bent. These are called cartilage. You do feel something in the upper parts of the ear that is not as soft as the ear lobe but, not as hard as a bone, This is cartilage. Cartilage is also found in the joints of the body. The bones move the way they do because of the presence of muscles. The muscle Bulged due to contraction (it became Smaller in length). When contracted, the muscle becomes shorter, stiffer and thicker. It Pulls the bone. Muscles work in pairs. When one of them contracts, the bone is pulled in that direction. The other muscle of the pair relaxes. To move the bone in the opposite direction, the relaxed muscle contracts to pull the bone towards its original position, while the first relaxes. A muscle can only pull. It cannot push. Thus, two muscles have to work together to move a bone.

Fig. 1

Que.1) The skull encloses and protects
the .....

a) Cartilage

b)Bones

c) Brain

d) Hair

Que.2) The portion of our body, we sit
on .....

a) Shoulder bones

b) Pelvic bones

c) Backbone

d) None of the above

Que.3) Two Prominent bones near the shoulder are called Shoulder bones.

a) True

b) False

Que.4) What is cartilage. Mention body parts where it is found?

Que.5) Explain how we are able to make bones move in ways we want to?

Answer Key

Que.1. c) Brain

Que.2. b) Pelvic bones

Que.3. a) True

Que.4) Answer: There are some additional parts of the skeleton that are not as hard as the bones and which can be bent. These are called cartilage. It is found in the upper parts of the ear and also in the joints of the body.

Que.5) Answer: The bones move the way they do because of the presence of muscles. When contracted, the muscle becomes shorter, stiffer and thicker. It Pulls the bone. Muscles work in pairs. When one of them contracts, the bone is pulled in that direction. The other muscle of the pair relaxes. To move the bone in the opposite direction, the relaxed muscle contracts to pull the bone towards its original position, while the first relaxes. A muscle can only pull. It cannot push. Thus, two muscles have to work together to move a bone.

WORKSHEET -6

CHAPTER - The living organisms and their surroundings

Competency based questions

MULTIPLE CHOICE QUESTIONS

1. Which of the following cannot be called a habitat?

(a) A desert with camels.

(b) A pond with fishes.

(c) A jungle with wild animals.

(d) Cultivated land with grazing cattle.

2. Following are some features of plants

(i) They lose a lot of water through transpiration.

(ii) Their leaves are always broad and flat.

(iii) They lose very little water through transpiration.

(iv) Their roots grow very deep into the soil.

Which of the combination of above features are typical of desert

plants?

(a) (i) and (ii)

(b) (ii) and (iv)

(c) (ii) and (iii)

(d) (iii) and (iv)

3. Boojho comes across an animal having a stream-lined and slippery body. What is the habitat of the animal?

(a) Water

(b) Desert

(c) Grassland

(d) Mountain

4. Which of the following are characteristics of living beings ?

(i) Respiration

(ii) Reproduction

(iii) Adaptation

(iv) Excretion

Choose the correct answer from the options below:

(a) (i), (ii) and (iv) only

(b) (i) and (ii) only

(c) (ii) and (iv) only

(d) (i), (ii), (iii) and (iv)

5. Earthworms breathe through their

(a) skin

(b) gills

(c) lungs

(d) stomata

6. Which of the following is not an example of response to stimulus?

(a) Watering in mouth when we see delicious food items.

(b) Closing of leaves of mimosa plant when touched.

(c) Shutting our eyes when an object is suddenly thrown in our direction.

(d) A chick hatching out of an egg.

7. Which of the following is correct for respiration in plants?

(a) Respiration takes place only during day time.

(b) Respiration takes place only during night.

(c) Respiration takes place both during day and night.

(d) Respiration takes place only when plants are not making food.

8. Unscramble the given words below to get the correct word using the clues given against them.

(a) SATPADAOINT - specific features or certain habits which enable a living being to live in its surroundings

(b) RETECOXNI - Waste products are removed by this process

(c) LUMISIT - All living things respond to these

(d) ROUCDPRENTOI - Because of this we find organisms of the same kind

9. Fill in the blanks:

(a) Saline water, hot air and sand are ..... components of a habitat.

(b) The habitat of plants and animals that live in .....is called the aquatic habitat.

c)..... enable a plant or an animal to live in its surroundings.

(d) Plants and animals that live on land are said to live in ..... habitats.

Answer key (Worksheet-6)

CHAPTER - The Living organisms and their surroundings

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(c) (ii) and (iii)

(d) (iii) and (iv)

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(d) ROUCDPRENTOI - Because of this we find organisms of the same kind

Ans. a) Adaptations

b) Exreation

c) Stimulus

d) Reproduction

9. Fill in the blanks:

(a) Saline water, hot air and sand are .....abiotic..... components of a habitat.

(b) The habitat of plants and animals that live in .....water ..is called the aquatic habitat.

c)..... Adaptation..... enable a plant or an animal to live in its surroundings.

(d) Plants and animals that live on land are said to live in ..... terrestrial.... habitats.

Worksheet -7

CHAPTER - Motion and measurement of distances

Competency based questions

1. The distance between Delhi and Mumbai is usually expressed in units of

(a) decametre

(b) metre

(c) centimetre

(d) kilometre

2. Which of the following does not express a time interval?

(a) A day

(b) A second

(c) A school period

(d) Time of the first bell in the school

3. Correct the following.

(i) The motion of a swing is an example of rectilinear motion.

(ii) 1m = 1000 cm

4. Fill in the blanks

(i) Motion of an object or a part of it around a fixed point is known as ..... motion.

(ii) A body repeating its motion after certain interval of time is in . ..... motion.

(iii) In rectilinear motion, object moves..... a . ..... line.

(iv) SI unit of length is . .....

5. Write one example for each of the following type of motion.

(i) Rectilinear

(ii) Circular

(iii) Periodic

(iv) Circular and periodic

Worksheet -7 (ANSWER KEY)

CHAPTER - Motion and measurement of distances

Competency based questions

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(d) kilometre

2. Which of the following does not express a time interval?

(a) A day

(b) A second

(c) A school period

(d) Time of the first bell in the school

3. Correct the following.

(i) The motion of a swing is an example of rectilinear motion.

Ans. Periodic motion

(ii) 1m = 1000 cm

Ans. 100 cm

4. Fill in the blanks

(i) Motion of an object or a part of it around a fixed point is known as ..... circular..... motion.

(ii) A body repeating its motion after certain interval of time is in . .... periodic..... motion.

(iii) In rectilinear motion, object moves...in a straight..... line.

(iv) SI unit of length is . Metre.....

5. Write one example for each of the following type of motion.

(i) Rectilinear- A car moving on the straight road.

(ii) Circular- fan

(iii) Periodic- swing

(iv) Circular and periodic- clock

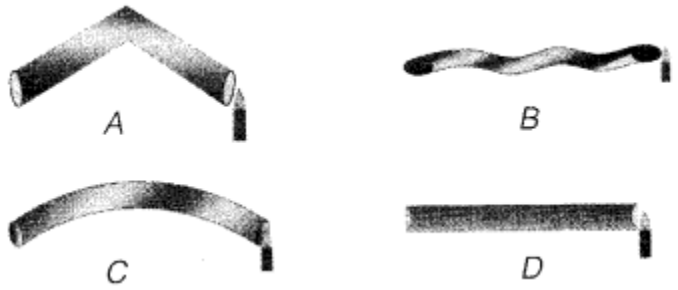
WORKSHEET -8

COMPETENCY BASED QUESTIONS

CHAPTER- "LIGHT,SHADOW AND REFLECTION"

Q1: MULTIPLE CHOICE QUESTIONS:

(1) Four students A, B, C and D looked through pipes of different shapes to see a candle flame as shown in figure.



Who will be able to see the candle flame clearly?

(a)A (b)B (c)C **(d)D**

(2)Which of the following can never form a circular shadow?
(a) A ball (b) A flat disc **(c) A shoe box** (d) An ice-cream cone

(3)Which is a device to image the sun?
(a) Plane mirror **(b) Pinhole camera** (c) A straight pipe (d) Glass slab

(4)Bouncing back of light from a shining surfaces is called as….
(a) Reflection (b) Refraction (c) Bending (d) Dispersion

(5)Light travels in a _____.
(a) straight line (b) curved line (c) zig-zag line (d) randomly

Q2:Assertion-Reason Questions:

(1) Assertion:A shadow is a dark outline or image cast by an opaque object that blocks light coming from a source of light.

Reason:It is formed when light hits the opaque object which does not let the light pass through.

Choose the correct option:

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

(2) Assertion:We can see the objects through air clearly, means we can observe all the objects in their original shapes and sizes without any disturbance.

Reason:The air is an Opaque object.

Choose the correct option:

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

(3) Assertion:Three identical towels of red, blue and green colour are hanging on a clothe's line in the sun. The colour of the shadow of towels does not change.

Reason:Shadow of an object does not change on changing its colour. Shadow will always show the absence of light at that place. So, the colour of shadow will remain same in all the cases. Thus, the shadows of all the towels are black in colour.

Choose the correct option:

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

(4) Assertion:In a completely dark room, if you hold up a mirror in front of you, you will see a reflection of yourself in the mirror.

Reason:In a completely dark room no image will be formed because there is no light in the room so no reflection of light takes place and no image will be formed.

Choose the correct option:

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

(4) Assertion:Moon is a luminous object because it has its own light.

Reason:Moon is non-luminous body because it shines by reflecting the sunlight falling on it.

Choose the correct option:

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Q3: Case-Study based questions:

(1) We see so many objects around us, colourful and different. On the way to school we see things like buses, cars, cycles, trees, animals and sometimes flowers. How do you think, we see all these objects? Think of the same places at night time if it were completely dark. What will you see? Suppose you go inside a completely dark room. Are you able to see any objects in the room? But, when you light a candle or a torch you can see the objects present in the room, isn't it? Without light, things cannot be seen. Light helps us see objects. The torch bulb is an object that gives out light of its own. The Sun, is another familiar object that gives its own light. During the day, its light allows us to see objects. Objects like the sun that give out or emit light of their own are called **luminous** objects. What about objects like a chair, a painting or a shoe? We see these when light from a luminous object (like the Sun, a torch or an electric light) falls on these and then travels towards our eye.

Q1:How we can see the different types of things around us?

Ans: We can see the different types if things around us because of Light.

Q2:Do we able to see the things in the dark?

Ans:No,we cannot see the things in the dark.

Q3:What are luminous objects?

Ans: Luminous objects are those objects which have their own light.

Q4:Give some examples of luminous objects.

Ans:The Sun,a torch or a electric light are examples of luminous objects.

(2) There are different types of objects around us.We can do grouping of objects on the basis of visibility through them as opaque,transparent or translucent, If

we cannot see through an object at all, it is an **opaque** object e.g Wood,Cardboard,Stone If you are able to see clearly through an object and it is allowing light to pass through is said to be **transparent** e.g Glass,Air There are some objects through which we can see, but not very clearly. Such objects are known as **translucent** e.g butter paper, plastic thin sheets,Vegetable oil

Q:What are the ways to group the objects?

Ans:We can group the objects on the basis of visibility through them.

Q2:What is the difference between Transparent,Translucent and Opaque objects?

Ans: Transparent: When we are able to see clearly through an object and it is allowing light to pass through it then it is called as **transparent**.

Translucent:There are some objects through which we can see, but not very clearly. Such objects are known as **translucent**.

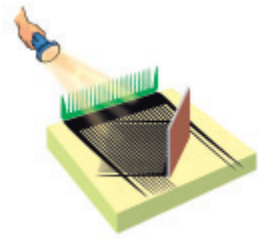
Opaque: The objects through which we cannot see at all are called as Opaque object.

Q3:Give examples of translucent objects

Ans:butter paper, plastic thin sheets,Vegetable oil

(3) There is an interesting phenomenon of light-Reflection of Light.The bouncing back of light rays when passed through an opaque object is called as reflection. Fix a comb on one side of a large thermocol sheet and fix a mirror on the other side as shown in Fig. 11.9. Spread a dark coloured sheet of paper between the mirror and the comb. Keep this in sunlight or send a beam of light from a torch through the comb. What do you observe? Do you get a pattern similar to that shown in Fig. below. This activity gives us an idea of the

manner in which light travels and gets reflected from a mirror.



Q1:Why we can get a pattern of lines on the thermocol sheet ?

Ans:We can get pattern of lines on the thermocol sheet because of reflection of light rays.

Q2:What is reflection of light?

Ans:The bouncing back of light rays when passed through an opaque object is called as reflection.

Q3:Do we see the pattern if there is no source of light?

Ans: No,we cannot see the pattern if there is no source of light.

(4) There is an interesting pin hole camera in Nature. Sometimes, when we pass under a tree covered with large number of leaves, we notice small patches of sun light under it (Fig. 11.6). These circular images are, in fact, pin hole images of the Sun. The gaps between the leaves, act as the pin holes. These gaps are all kinds of irregular

shapes, but, we can see circular images of the Sun. Surely, all these results that we are seeing, formation of shadows and pinhole images are possible only if light moves in a straight path?

Q1:Name the thing which acts as a Pinhole?

Ans:The gaps between the leaves acts as a pinhole.

Q2:How is it possible to see circular images of the sun?

Ans:It is possible to see circular patches of the sun because of formation of Shadow.

Q3:Which property of light is responsible to see the images ?

Ans :The light travels in a straight line property is responsible to see the images.

(5) Now, one by one hold each of the opaque objects in the sunlight, slightly above the ground. What do you see on the ground? You know that the dark patch formed by each on the ground is due to its shadow. Sometimes you can identify the object by looking at its shadow (Fig. 11.2). Spread a sheet of paper on the ground. Hold a familiar opaque object at some height, so that its shadow is formed on the sheet of paper on the ground. Ask one of your friends to draw the outline of the shadow while you are holding the object. Draw outlines of the shadows of other objects in a similar way. Now, ask some other friends to identify the objects from these outlines of shadows. How many objects are they able to identify correctly? Do you observe your shadow in a dark room or at night when there is no light? Do you observe a shadow when there is just a source of light and nothing else, in a room? It seems we need a source of light and an opaque object, to see a shadow. Is there anything else required? This is an activity that you will have to do in the dark. In the evening, go out in an open ground with a few friends. Take a torch and a large sheet of cardboard

with you. Hold the torch close to the ground and shine it upwards so that its light falls on your friend's face. You now have a source of light that is falling on an opaque object. If there were no trees,

building or any other object behind your friend, would you see the shadow of your friend's head?

Q1:What do you observe on ground if we keep any Opaque object in the path of light?

Ans: We can observe the shadow of an Opaque object on the ground.

Q2:How you make shadow of different objects?

Ans: We need three things -A source of light,Screen and an Opaque object to make a shadow.

Q3:Do we need only light to make a shadow?

Ans:Yes,without light we cannot make a shadow.

Worksheet -9

CHAPTER- Electricity and Circuits

Competency based questions

MCQs:

1. Electric energy is produced from the _____ within the cell.

   (a)Chemicals

   (b)Metals

   (c)Terminals

   (d)Switch

2. _____ is the positive terminal of an electric cell.

   (a) Metal disc

   (b) Metal case

   (c) Metal cap

   (d) Metal base

3. The path along which electric current flows is:

   (a) Switch

   (b)Electric circuit

   (b) Electric cell

   (c) Element

4. The filament of bulb is made up of:

   (a) Chromium

   (b) Aluminium

   (c) Copper

   (d) Tungsten

5. Paheli is running short of connecting wires. To complete an electric circuit, she may use a

   (a) Glass bangle

   (b) Thick thread

   (c) Steel spoon

   (d) Rubber pipe

Assertion/Reason Questions:

Assertion: A simple statement.

Reason: Reason is the explanation for the assertion.

Study the two statements labeled as Assertion (A) and Reason (R). Point out if:

(a) Both, A and R, are true and R is the correct explanation of A

(b) Both, A and R, are true but R is not the correct explanation of A

(c) If A is true but R is false

(d) If A is false but R is true

1. Assertion (A): In a closed circuit, the electric current passes from one terminal of the electric cell to other terminal.

   Reason (R): Switch is a simple device that is used to either break the electric circuit or to complete it.

   Ans. (b) Both A and R are true but R is not the correct explanation of A.

2. Assertion (A): Human body is a bad conductor of electricity.

   Reason (R): The materials which allow electric current to pass through them are conductors of electricity.

   Ans. (d)A is false, R is true.

3. Assertion (A): Rubber and plastics are used for covering electric plugs, switches and other parts of electrical appliances.

   Reason (R): The materials which do not allow electric current to pass through them are called insulators.

   Ans. (a) Both A and R are true and R is the correct explanation of A.

4. Assertion (A): Electric bulb glows when the switch is turned ON in an electric circuit.

   Reason (R): Electric switch acts like a conductor in an electric circuit when it is in ON position.

   Ans. (a) Both A and R are true and R is the correct explanation of A.

5. Assertion (A): Tungsten metal is used for making filaments of

bulbs.

Reason (R): The melting point of tungsten is very low.

Ans. (c)A is true, R is false.

Case Study Based:

1. A student is conducting an experiment to determine whether certain materials are conductors or insulators. The student sets up a circuit with a cell, bulb, switch and wires. The materials being tested are plastic scale, wooden stick, eraser and metal coin. After turning ON the switch, the bulb only lights up when the metal coin is connected.

   (a) The bulb did not glow when plastic scale, wooden stick or eraser were inserted in the circuit. Why?

   Because all these materials are insulators.

   (b) What is the purpose of a switch in the electric circuit?

   Switch is either used to make an electric circuit or break it.

   (c) What are conductors and insulators? Give examples.

   The materials which allow the current to pass through them are conductors. Ex- metals like iron, copper.

   The materials which do not allow the current to pass through them are insulators. Ex- rubber, plastic.

2. In an electric bulb, the thin wire that gives off light is called as filament. One reason for a bulb to fuse is a break in its filament. A break in the filament of an electric bulb means a break in the path of current between the terminals of electric cell. Thus, a fused bulb does not light up as no current passes through its filament.

   (a) What is 'filament' of an electric bulb?

   The thin wire that gives off light in a bulb is called as filament.

   (b) How does an electric bulb fuse?

   One reason for a bulb to fuse is a break in its filament.

   (c) Why a fused bulb does not light up?

   A break in the filament of an electric bulb means a

break in the path of current between the terminals of electric cell. Thus, a fused bulb does not light up as no current passes through its filament.

3.

Raju had an electrical breakdown at his house in the morning, so he called an electrician. During an electrical repair job with the tools like screwdrivers and pliers, an electrician forgot to wear rubber gloves and accidentally touches a live wire with bare hands. Luckily, the electrician does not get an electric shock.

(a) On touching the live wire with bare hands, electrician did not get an electric shock. What could be the reason?

The electrician must be wearing plastic/rubber footwear or he must be standing on some insulating object like wooden table.

(b) Why should an electrician use rubber gloves while repair work?

Because rubber is an insulator and insulators do not allow the passage of electric current through them. So he will not get an electric shock.

4.

A student is experimenting with an electric cell and a motor. The student connects one end of the wire to the negative terminal of the cell and forgot to connect the other terminal of the wire.

(a) What should the student do next to make the motor work?

He should connect the other end of the wire to positive terminal of the cell.

(b) What is a terminal?

It is a point of connection for closing an electric circuit.

5.

(c) How many terminals do an electric cell has?

Two- positive and negative terminal.

Observe the given diagrams:

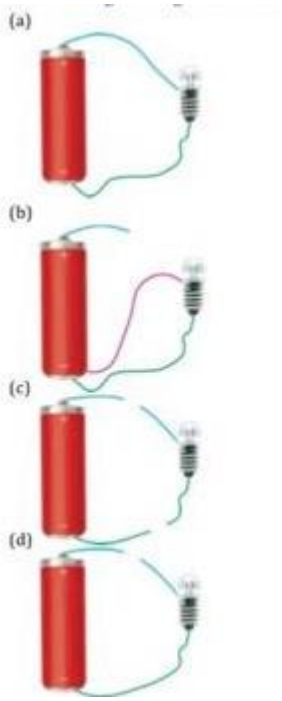
(a) Which one shows the complete circuit?

(b) In which case/cases the bulb will not glow and why?

(a) Diagram 'a' is a complete circuit.

(b)The bulb will not glow in b, c and d case because the circuit is not complete in c and d case. In case b,

terminals are not connected rightly.



Worksheet -10

CHAPTER- FUN WITH MAGNETS

Competency based questions

M.C.Q.

1. North pole of a magnet can be identified by:

(a) Another magnet having its poles marked as North pole and South pole.

(b) Another magnet no matter whether the poles are marked or not.

(c) Using an iron bar.

(d) Using iron filings.

2. A bar magnet is immersed in a heap of iron filings and pulled out. The amount of iron filling clinging to the:

(a) North pole is almost equal to the south pole.

(b) North pole is much more than the south pole.

(c) North pole is much less than the south pole.

(d) Magnet will be same all along its length.

3. Fill in the blanks

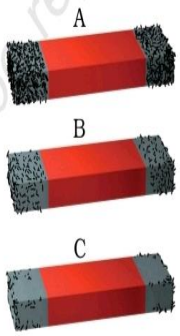
(i) When a bar magnet is broken; each of the broken part will have ..... pole/poles.

(ii) In a bar magnet, magnetic attraction is ..... near its ends.

4. Match the following:

COLUMN I	COLUMN II
(a) Magnet attracts	(i) rests along a particular direction
(b) Magnet can be repelled	(ii) iron
(c) Magnet if suspended freely	(iii) by another magnet
(d) Poles of the magnet can be identified by	(iv) iron filings

5. Three magnets A, B and C were dipped one by one in a heap of iron filing. This figure shows the amount of the iron filing sticking to them.



The strength of these magnets will be

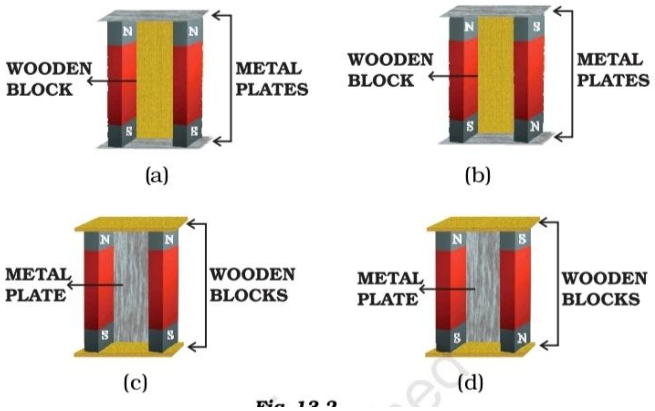
(a) A>B>C

(b) A<B<C

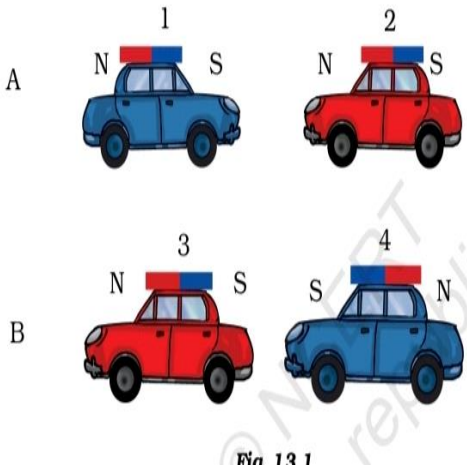
(c) A=B=C

(d) A<B>C

6. The arrangement to store two magnets is shown by figures (a), (b), (c) and (d) in Figure. Which one of them is the correct arrangement?



7. Observe the pictures A and B given in Figures carefully. Which of the following statement is correct for the above given pictures?



(a) In A, cars 1 and 2 will come closer and in B, cars 3 and 4 will come closer.

(b) In A, cars 1 and 2 will move away from each other and in B, cars 3 and 4 will move away.

(c) In A, cars 1 and 2 will move away and in B, 3 and 4 will come closer to each other.

(d) In A, cars 1 and 2 will come closer to each other and in B, 3 and 4 will move away from each other.

Worksheet -10(ANSWER KEY)

CHAPTER - Fun with magnets

1. a)

2. a)

3. i) Two

ii) More

4. a) - ii), iii), iv)

b)- iii)

c)- i)

d)- i), iii)

5. a)

6. b)

7.d)

Worksheet -11

Competency based questions

CHAPTER- Air Around Us

A. MULTIPLE CHOICE QUESTIONS

Q1Which of these would best experiment to show the presence of air around us?

(a) Keeping a bowl of water in sunlight for one hour

(b) Keeping a glass of water in freezer for half an hour

(c) Placing a weather cock on an open roof away from any obstacle
(d)Placing bricks one upon another to make a small stack in an open lawn

Correct Answer: Option ©

Q2Which of these gases is associated with human activities that involve the burning of fuels and becomes a major source of air pollution?

(a) Oxygen

(b) Nitrogen

(c) Water vapour

(d) Carbon dioxide

Correct Answer: Option (d)

Q3 A student wants to prove that air is present in water, which is why animals living underwater can breathe. Which of these would help him prove the presence of air in water?

(a) By boiling water

(b) By freezing water

(c) By mixing water with oil

(d) By pouring water in an empty jar

Correct Answer: Option (a)

Q4 A lump of soil is taken in a jar and water is poured on it. It is observed that when the water was poured, bubbles came out from the soil, the water moved deeper into the lump, and the soil became loose and wet. Which observation from the experiment proves the presence of air in soil?

(a) The soil got wet

(b) The soil became loose

(c) Bubbles came out

(d) Water seeped into the lump

Correct Answer: Option ©

Q5 The table lists a few activities.

1. Processing of products in factories 2. Farmers burning crop residue 3. Vehicles moving on road 4. Cattle grazing in fields

Which of these activities would cause air pollution?

(a) 1 and 4

(b) 2 and 4

(c) 3, 2, and 1

(d) 4, 1, and 3

Correct Answer: Option ©

Q6 A student wants to prove that air is present in water, which is why animals living underwater can breathe. Which of these would help him prove the presence of air in water?

(a) By boiling water

(b) By freezing water

(c) By mixing water with oil

(d))By pouring water in an empty jar

Correct Answer: Option (a)

B ASSERTION REASON QUESTION

(1) Assertion – Air is found everywhere.

Reason – we can feel air and we can see air.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option C

(2) Assertion – In air there are nitrogen, oxygen, Co2, H2O and others gases are found.

Reason –Air is the mixture of different gases.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option A

(3) Assertion – The Co2 And oxygen are involved in respiration.

Reason – The plants and animals consume oxygen for respiration and produce carbon dioxide.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option A

(4) Assertion- Atmosphere is essential for life on earth.

Reason-The envelope of air that surrounds the earth is known as atmosphere.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option B

(5) Assertion - Plants and animals help each other in exchange of gasses.

Reason -Animals inhale oxygen and release carbon-dioxide,into the atmosphere.The carbon-dioxide is taken by plants to prepare

their food by the process of photosynthesis and release oxygen.The oxygen is then again taken by the animals to breathe.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option A

(6) Assertion -Air is a mixture of gases.

Reason- Air is made up of primarily of oxygen and nitrogen,as well as carbon-dioxide and other gases.In the air,these gases retain their properties,as a result the air is referred to as a mixture.

a) Assertion and reason both are correct statement and reason is correct explanation for assertion.

b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.

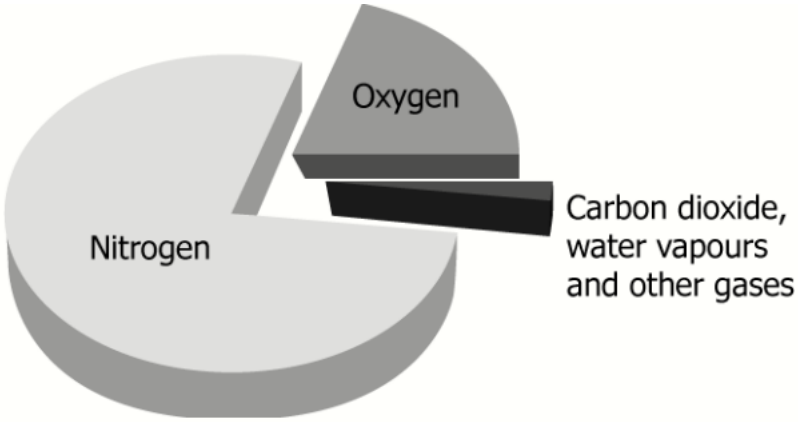
c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

Ans- Option A

CASE BASED QUESTIONS

(1)The pie chart shows the composition of air



Which is the most abundant component of air?

(a) Oxygen

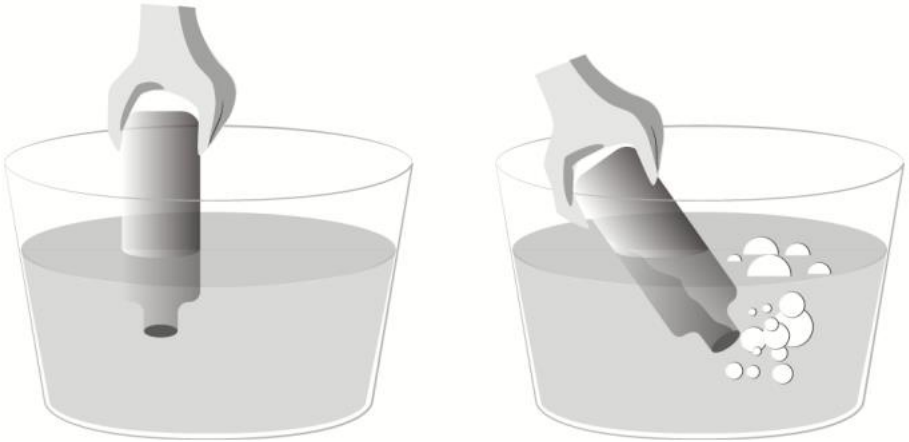
(b) Nitrogen

(c) Water vapour

(d) Carbon dioxide

Correct Answer: Option (b)

(2) A student performs an experiment to show the presence of air. He takes an empty bottle and dips in a bucket of water in two different positions, one by one, as shown.



Based on the experiment, what can be concluded?

(a) An empty bottle does not hold air.

(b) Bottles can only be filled with water if they occupy air.

(c) Air escapes from bottles if they are turned upside down.

(d) Air escapes in form of bubbles when the bottle is tilted in water.
Correct Answer: Option (d)

(3) Raheem performs an experiment in a dark room, where all curtains are pulled down. He then open a small slit from the window such that a beam of sunlight could enter the room. He observes tiny shining particles moving in the beam of sunlight. What does the presence of these shining particles show?

(a) Air has oxygen.

(b) Air has nitrogen.

(c) Air has water vapour.

(d) Air has dust particles.

Correct Answer: Option (d)