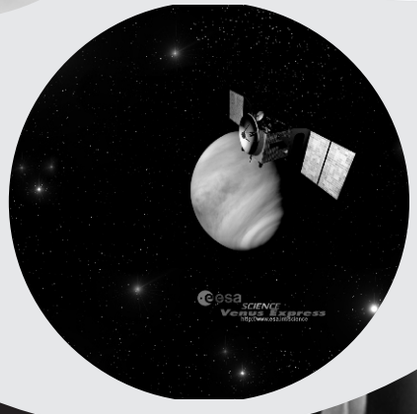
Integrated Science

5



1 Growth and Developments in Plants

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (b) 2. (a) 3. (c) 4. (a).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. Dispersal is necessary for proper growth of plants because it all the seeds fall near to the mother plant and start germinating they would not get enough light, water and space to grow.

2. Rice needs high temperature and abundant water supply for its growth. That is why it is grown in summer season and not in winter season.

B. Give one example of each :

Ans. 1. Monocot : **Maize**
2. Dicot : **Gram**
3. Seed dispersed by wind : **Cotton**
4. Plant that grows from leaves : **Bryophyllum**
5. Seed dispersed by water : **Coconut**
6. Pant grows from stem cuttings : **Rose**

C. Give one word for the following :

Ans. 1. Baby plant inside the seed **Embryo**
2. Chemicals that enhance the growth of plants **Fertilizers**
3. Chemicals that protect the crops from disease/pests **Pesticides**
4. Plants that have two cotyledons **Dicot**
5. Crops that grow in winter season **Rabi**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. The seed coat protects the internal delicate parts of the tiny plant called **embryo**.
2. Plants with two cotyledons are called **dicot** plants.
3. The shoot producers the **radicle** and **plumule**.
4. The essential conditions required for seeds to germinate are **water**, **air** and **warmth**.
5. **Rice**, **jowar** and **bajra** are examples of kharif crops.
6. **D.D.T.** and **gammaxene** are common insecticides.

E. Write True or False :

Ans. 1. True 2. False 3. True 4. False 5. True.

F. Take the hint and tell the difference between :

Ans. 1. Pea seed has tiny leaves whereas maize grain has big leaves.
2. Rice grows in loamy soil whereas wheat grows in sandy and irrigated soil.
3. Dry seed is small in size and has thick dry seed coat. Soaked seed, on the other hand, is big in size and has thin, wet seed coat.
4. Coconut seed is dispersed by water whereas tiger nail seed is dispersed by wind.
5. Rabi crops are grown in the winter season and kharif crops are grown in summer season.

G. Match the following :

Ans.

1.	Rose	a.	new plants arise along the edge of the leaf
2.	Bryophyllum	b.	outer hard covering of seeds
3.	Pea	c.	grow from root
4.	Seed coat	d.	grows from buds (eye)
5.	Carrots and beets	e.	stem cutting
6.	Potato	f.	explosion

H. Answer the following questions :

Ans.

1. Seeds need moisture, air and warmth for germination.
2. Plants provide us food, medicines, clothes, etc.
3. Some seeds do not get favourable conditions such as right temperature or soil. That is why they are not able to grow into new plants.
4. A seed has different parts. The outer hard covering of the seed is called seed coat. The seed coat protects the embryo. A seed also has seed leaves and the baby plant, inside the seed coat.
5. The change of a seed into a seedling is called germination.
6. Cotyledons store food for the baby plant. In this way they help in the growth of a seedling.
7. Seeds should be dispersed because the lack of dispersal will prevent at the seeds from growing. The agents of dispersal are : wind, water, men, animals, birds, explosion.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

2 Varying Lifestyles

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (c) 2. (b) 3. (a) 4. (b).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans.

1. Animals have different body coverings because they have different body structures. Also they have different uses of their body coverings.
2. Humans are omnivores because they eat both plant products and flesh of animals.

B. Name the following :

Ans.

1. Breathing organs of fish **Gills**
2. Animals that do not eat flesh **Herbivores**
3. Back legs of a tiger **Hindlimbs**
4. Body part that a turtle uses to swim **Paddle like limbs**
5. Flying organs of a bird **Wings**

C. Do they breathe through lungs, gills, air holes, skin or body surface? Write L, G, B in the blanks. (You may have to write two letters against some).

Ans.

1.	Tadpole	**S**	2.	Earthworm	**B**
3.	Grasshopper	**B**	4.	Whale	**L**
5.	Fish	**G**	6.	Amoeba	**L**
7.	Frog	**B, L**	8.	Human being	**L**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. All animals and humans need food to **graw** and **survive.**
2. Front teeth of rodents are **small** and **sharp.**
3. Mammals, reptiles and birds breathe through their **lungs.**
4. Migration is done by animals to **search food** to escape **adverse weather** and to **breed.**

E. Write True or False :

Ans. 1. False 2. True 3. True 4. False 5. True.

F. Match the following :

Ans.

1. Prawns	a. breathe through spiracles
2. Mammals	b. breathe through gills
3. Frogs	c. crawl on the ground
4. Grasshoppers	d. breathe through their lungs
5. Lizards	e. webbed hindlegs

G. Answer the following questions :

Ans. 1. Do yourself.
2. Insects have six legs to walk. Ants and cockroaches crawl using their legs. Some insects like the grasshopper hop with their strong hindlimbs. Some insects can fly. They have wings made of tiny scales. They move their wings with the help of their chest muscles.
3. An insect breathes with the help of holes present in their body surface known as spiracles. A fish breathes with the help of their gills.
4. Fish move their body and tail from side to side to swim. Their fins help them in balancing, changing direction and stopping while swimming. Frogs use their webbed hindlegs to swim. Turtles have paddle-like limbs to swim. Penguins use their wings like flippers to swim. Prawns and tadpoles use their legs to swim. An insect called water boatman uses its legs like oars to swim.
5. Most birds fly in air through their wings. They perch on the branch of a tree with the help of their hindlimbs.
6. A snake has certain scales or plates on the underside of its body, that help it to move.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

3 Interdependence in Nature

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the right answer :

Ans. 1. (a) 2. (b) 3. (c) 4. (c).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. It is necessary to protect wild animals because they help us in maintaining the ecological balance.
2. The green plants are the only living beings capable of making their own food. All the other living beings depend on plants for their food. Thus, all food chains originate from the green plants.

B. Name the following :

Ans. 1. A life giving gas : **Oxygen**

2. Gas we breathe out during respiration. **Oxygen**
3. Scattering of Seeds. **Dispersal**

C. Classify the following animals under the different habits according to their feeding habits :

Ans. Herbivore **goat, cow, rabbit, elephant, moneky**
Carnivore **lion, tiger, fox, leopard, dog**
Omnivore **man, cat, rat, bear.**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans.
1. A **food chain** is a sequence of living things found in an area.
2. Today **Great Indian Bustard** are found only in the desert areas of Rajasthan and Gujarat.
3. Many animals help in the **dispersal** of seeds.
4. Plants cannot grow if there is no **soil.**
5. Plants are called **producers** and animals are called **consumers.**
6. The sun provides **energy** to plants for photosynthesis.
7. Animals depend on plants for **oxygen** to breathe.

E. Write True or False :

Ans.
1. False 2. True 3. False 4. Fales
5. True 6. True 7. True 8. True.

F. Answer the following questions :

Ans.
1. Plants provide oxygen to animals which they give out during the process of photosynthesis. Similarly, animals give out carbon dioxide during the process of breathing. In this way plants and animals depend on each other for their requirements of oxygen and carbon dioxide.
2. Photosynthesis helps a plant to produce its own food. This food is used by animals for their survival. In this way, photosynthesis in plants is useful to animals.
3. When animals die, their dead bodies decay and mix with the soil. This adds humus to the soil, which makes it fertile for plants.
4. If there were no tigers in a forest, the population of deer will increase very much. This would result in the shortage of food for them.
5. A food chain is a sequence of living thing living in a particular region, in which each living thing is food for the next member in the sequence. Such as a deer eats plants as food and a lion eats a deer as its food.
6. Forests and forest communities are very helpful and important for us. Forests provide us food, oxygen, medicines and wood. They also protect soils and prevent floods.
7. Great Indian Bustard is a heavy ground bird, almost the size of a young ostrich. Its feathers form a pattern of black bars and dots. The head looks like a crown and its neck is snowwhite. Hunting and disturbing its natural home has made this bird almost extinct. Once this bird was found in almost all parts of the country. Now it is found only in the desert areas of Rajasthan and Gujarat and in Maharashtra.
8. We can protect our forests by protecting both its plants and animals. Trees should be banned to cut in large number for wood or for clearing land for living or agriculture.

Section 3 Activity (CCE Pattern)

Solve the crossword puzzle to discover some endangered and extinct animals of the world :

Ans.

					1.T					2.H			
3.S	I	B	4.E	R	I	A	N	5.C	R	A	N	E	
					G			H		N			
					E			E		6.	A		R
7.L	E	O	P	A	R	D		E		U			
								T		8.L	I	O	N
9.M	A	C	A	Q	U			A					
			N				10.R	H	11.I	N	O		
									O				
									N				
						12.L	Y	N	X				

A. Answer the following questions orally :

Ans. 1. Rice needs high temperature and abundant water supply for its growth. That is why it is grown in summer season and not in winter season.
2. Humans are omnivores because they eat both plant produce and flesh of animals.
3. It is necessary to protect wild animals because they help us in maintaining the ecological balance.

B. Tick (✓) the correct answer :

Ans. 1. c. 2. a. 3. b. 4. a.

C. Give one example of each :

Ans.

1. Monocot	**Maize**
2. Dicot	**Gram**
3. Seed dispersed by wind	**Cotton**
4. Plants that grow from leaves	**Bryophyllum**
5. Seed dispersed by water	**Coconut**

D. Do they breathe through lungs, gills, air holes, skin, or body surface? Write L, G, A, S or B in the blanks. (You may have to write two letters against some).

Ans.

1. Tadpole	**S**	2. Earthworm	**B**
3. Grasshopper	**B**	4. Whale	**L**
5. Fish	**G**	6. Amoeba	**L**
7. Frog	**S L**	8. Human being	**L**

E. Classify the following animals under the different habits according to their feeding :

Ans.

Herbivores	**Rabbit, goat, cow, elephant, monkey**
Carnivores	**lion, tiger, fox, leopard, dog**
Omnivores	**man, cat, rat, bear**

Unit 2 : Human Body

4

Our Skeletal System

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (b) 2. (a).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. The last two pair of ribs which are free at the front end are called floating ribs.
2. We can keep our body fit and healthy by eating nutritious food and exercising daily.

B. Encircle the odd one :

Ans. 1. Tongue Arms Legs **Stomach**
2. Yoga **Sleeping** Swimming Jogging
3. Wrist Elbows **Knees** Fingers

C. Name the following :

Ans. 1. The place where two bones meet. **Joint**
2. Some muscles in our body which move on their own. **Involuntary**
3. A jelly-like substance found in the middle of some bones. **Marrow**
4. Thirty three small bones found in our back. **Vertebrae**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. **Lower jaw** is the only movable bone in the skull.
2. The backbone protects the **spinal cord.**
3. When a muscle contracts, it becomes **shorter** and thicker.
4. Blood-cells are produced in the **bone-marrow.**

E. Write True or False :

Ans. 1. True 2. False 3. True 4. False.

F. Match the following :

Ans.

1. The upper part of the skull	a. Spine
2. Humerus	b. Thigh bone
3. Femur	c. A bone in the upper arm
4. Backbone	d. 8 bones

G. Define the following :

Ans. **1. Vertebrae :** These are small bones present in the backbone.
2. Tendons : A tendon is is a tough band of fibrous connective tissue that usually connects muscle to bone.
3. Correct posture muscles : To keep our body fit and have strong muscles we need to walk erect or sit straight.
4. Joints : These are the places where the two bones meet.
5. Ribs : These are the twelve pairs of thin and curved bones.
6. Girdles : These are the places where limbs are joined to the backbone.

H. Answer the following questions :

Ans. 1. The different parts of our skeleton are as follows :
i. The Skull ii. The backbone iii. Two pairs of limbs iv. Two pairs of girdles.
2. The skull is the bony structure consisting of brain-box and facial bones. The Rib cage are twelve pairs of thin and curved bones called ribe. These bones from a rib cage which protect the heart and lungs.
3. A hinge joint is like the hinges in a door. We have hinge joints in our elbows, Fingers, knees and toes. They allow movement of the bones in one direction, up and down.
4. The muscles that we can move at our own will are called voluntary muscles. They are under our control. The muscles of the tongue, arms, legs, etc. are voluntary muscles.
The muscles which are not under our control and work on their own are called involuntary muscles. For example, the muscles of stomach and arteries.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

5 The Brain and The Nervous System

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (a) 2. (c) 3. (a).

Section 1 Formative Assessment (CCE Pattern)

1. Answer the following questions orally :

Ans. 1. The brain uses motor nerves to instruct the body parts.
2. Humans are more intelligent than other animals because they can think and use their brain in for better way than other animals.

B. Encircle the odd one :

Ans. 1. Cerebellum (Liver) Cerebrum Medulla
2. Eyes Nose (Medulla) Skin
3. Brain Spinal cord Nerves (Tongue)

C. Complete the series :

Ans. 1. Cerbelllum : muscles :: cerebrum : **intelligence**
2. Bundles of fibres : nerves :: taste buds : **nerve endings**
3. Bitter : taste buds :: sound : **eardrums**
4. Learn : cerebrum :: heart beat : **medulla**
5. Eyes : sight :: skin : **feeling**

D. Name the following :

Ans. 1. The actions controlled by the spinal cord. **Reflex actions**
2. The part of the brain that controls the involuntary actions of the internal organs. **Medulla**
3. The nerves that cause movement of the muslces. **Motor nerves**
4. The nerves that carry message from the skin to the brain. **Sensory nerves**
5. The part of the eye that focuses the picture. **Retina**

Section 2 Summative Assessment (CCE Pattern)

E. Fill in the blanks :

Ans. 1. The spinal cord is protected in the **vertebral column.**
2. The brain, spinal cord and **nerves** form our **nervous** system.
3. Spinal cord begins at the **brain.**
4. The **brain** is protected in the skull.
5. The vertebral column runs all along your **backbone.**

F. Write True or False :

Ans. 1. True 2. True 3. False 4. True 5. True 6. False.

G. Match the following :

Ans.

1. Brain	a. Threadlike structures
2. Nerve cells	b. Protected by the backbone
3. Spinal cord	c. Involves only nerves and spinal cord
4. Skull	d. Centre of the nervous system
5. Reflex actions	e. Protects than brain

G. Answer the following questions :

Ans. 1. The tree parts of the brain and the function of them are as follows :

i. Cerebrum : It is the control centre of the brain. It is responsible for all the voluntary activities of our body.

ii. Cerebellum : It coordinates and controls our muscular movements. It keeps our body balanced and straight.

iii. Medulla : It controls the actions like respiration, circulation and heart beat.

2. Nerves carry the impulses to the brain and spinal cord and carry the order to the muscles.
3. The types of nerves and their functions are as follows :

i. Sensory nerves : These nerves carry messages from the sense organs to the brain or spinal cord.

ii. Motor nerves : These nerves carry order from the brain or the spinal cord to the muscles to move or glands to secrete.

iii. **Mixed nerves :** These muscles do the job of both these musles.

4. Actions are automatic and are controlled by the spinal cord. For example, when our finger comes too close to a hot object, say a hot iron, the sensory nerves quickly pass a message to the spinal cord.
5. The space between the skull and the brain is filled with a clear liquid which protects it against jerks and injuries by working as a cushion.
6. The different sense organs in our body are : Eyes, ears, nose, tongue and skin.
7. We see an object before us with the help of our eyes. When the light reflected from an object enters the lens of our eyes, we see the object.

Section 3 Activity (CCE Pattern)

Use the words given below to explain the following :

Ans. (a) First I look at am object. Its image is formed inside the eye. The nerves from the eye take message to our brain. The brain stored the information and helps us recognise that object.

(b) First the sound enters our ears. It passes through the middle ear. This causes the ear drum to vibrate and take that sound to inner ear. The nerves present here carry vibration to brain. The brain use stored vibration to help us know about sound.

Draw neat sketches of (i) tongue and (ii) eye; and label them.

Ans. Do it yourself.

Unit 2 : Human Body

6 Food, Health and Diseases

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (a) 2. (c) 3. (a).

Section 1 Formative Assesment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. Germs are the disease-causing bacteria.

2. We should keep our surroundings clean so as to remain healthy.

B. Fill in the blanks :

Ans.

	Nutrient	Found in			
1.	Iron	**Cashews,**	**Egg,**	**Fish,**	**Meat**
2.	Protein	**Curd,**	**Milk,**	**Pulses,**	**Peas**
3.	Vitamin C	**Papaya,**	**Guava,**	**Cauliflower,**	**Orange**
4.	Vitamin **A**	**Liver,**	**Sweet Potatoes,**	**Carrots,**	**Lettuce**
5.	Carbohydrate	**Whole grains,**	**Vegetables,**	**Fruits,**	**Beans**

C. Complete the following table :

Ans.

	Diseases	Germ Type	Mode of transmission
1.	Typhoid	**bacteria**	Infected food and water
2.	Malaria	**Protozoa**	**Insect bite**
3.	Chicken pox	**Virus**	**Direct contact**
4.	Cholera	bacteria	**Infected fool and water**
5.	Measles	**Virus**	**Direct contact**
6.	Plague	**Bacteria**	**Insect bite**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans.
1. **Bacteria** are single celled plants.
2. **Vaccination** protects us from certain germs.
3. Fungi are very small non-green **plants.**
4. Diseases are of two types **non-communication** and **communicable** diseases.
5. Deficiency of vitamin D causes **rickets.**
6. Anopheles mosquito causes **Malaria** while **Aedes mosquito** causes dengue.
7. Disease-causing micro-organisms are called **germs.**

E. Name any two diseases caused by :

Ans.

1. Germs in the air	**Diptheria**	**Measles**
2. Contaminated food	**Cholera**	**Typhoid**
3. Insect bites	**Plague**	**Malaria**
4. Direct contact with the patients.	**Measles**	**Chicken Pox**

F. Match the following :

Ans.

1. Soyabean	e. Vitamin D
2. Cereals	a. Carbohydrates
3. Sunlight	c. Non-communicable diseases
4. Calcium and phosphorus	b. Bones
5. Malaria	d. Protein

G. Answer the following questions :

Ans.
1. Names of main nutrients and their usefulness are as follows :

i. Carbohydrates and fats : These are energy giving nutrients. They provide energy to us.

ii. Proteins : These nutrients help to build our body. They are helpful in making the skin, muscles and food healthy. They also help us to repair damage in our body.

iii. Vitamins and minerals : These nutrients give resistance to our body to fight against diseases.

2. A daily diet that provides all the nutrients in the right amount, is called a balanced diet. When one does not get a balanced diet, one may fall sick and become weak.
3. Non-communicable diseases are those diseases which are not spread by the transfer of germs from one person to a particular nutrient in our diet. We can prevent these diseases by taking sufficient quantity of all nutrients.
4. Diseases that spread from one person to another, are called communicable diseases. These diseases spread from one person to another in the following ways.

i. Air : Germs found in the air can make a healthy person sick.

ii. Infected food and water : Infected food and water can also make us sick.

iii. Direct contact : Many diseases spread through direct contact with a sick person.

iv. Insect bites : Insect bites too spread many kinds of diseases.

5. Germs are transferred from one person to another through air, infected food and water, direct contact and insect bites.
6. To control malaria and dengue; one should do the following :

Do not allow water to collect around homes, gardens, schools, offices and playgrounds as mosquitoes lay their eggs in water.

Introduce fish in the ponds. They feed on mosquito larvae and do not let mosquitoes multiply.

Use mosquito repellent cream to keep mosquitoes away.

Use a mosquito net to sleep in.

If malaria is common in your area, ask your doctor to prescribe preventive medicines and take them regularly.

7. Vaccines are made of small quantities of very weak germs of a particular disease. When they enter the body, the body produced substances capable of fighting the germs of that diseases.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

Formative Assessment-2

A. Answer the following questions orally :

Ans.
1. We can keep our body fit and healthy by eating nutritious food and exercising daily.
2. Humans are more intelligent that other animals because they can think and use their brain in far better way than other animals.
3. Germs are disease causing bacteria.

B. Tick (✓) the correct answer :

Ans. 1. b. 2. a. 3. a. 4. a.

C. Name the following :

Ans.

1.	The place where two bones meet	**Joint**
2.	Some muscles in our body which move on their own	**Voluntary muscles**
3.	A jelly-like substance found in the middle of some bones	**Marrow**
4.	A very strong joint that can move in two directions	**Ball and socket joint**
5.	Thirsty three small bones found in our back	**Vertebrae**

D. Complete the following table :

Ans.

	Diseases	**Germ Type**	**Mode of transmission**
1.	Typhoid	**Bacteria**	**Infected food and water**
2.	Malaria	**Protozoa**	**Insect bite**
3.	Chicken pox	**Virus**	**Direct contact**
4.	Cholera	**Bacteria**	**Infected food and water**

E. Encircle the odd one :

Ans.

1.	Cerebellum,	(Liver,)	Cerebrum,	Medulla
2.	Eyes,	Nose,	(Medulla,)	Skin
3.	Brain,	Spinal cord,	Nerves,	(Tongue)
4.	(Boiling,)	Mixing,	Canning,	Salting

Summative Assessment-2

A. Fill in the blanks :

Ans.
1. The seed coast protects the internal delicate parts of tiny plant called **embryo.**
2. The front limps are known as **forelimbs** and the back limbs are known as **hindlimbs.**
3. Animals depend on plants for **oxygen** to breathe.
4. The **brain** is protected in the skull.
5. Fungi are very small non-green **plants.**

B. Write True or False :

Ans. 1. False 2. False 3. True
4. True 5. False.

C. Match the following and write two examples for each :

Ans.

1.	Mammals	a.	involves only nerves and spinal cord
2.	Backbone	b.	protein
3.	Reflex actions	c.	breathe through their lungs
4.	Soyabean	d.	grows from buds (eye)

D. Define the following :

Ans.

1. **Vertebrae :** These are small bones present in the backbone.
2. **Tendons :** A tendon is is a tough band of fibrous connective tissue that usually connects muscle to bone.
3. **Correct posture muscles :** To keep our body fit and have strong muscles we need to walk erect or sit straight.
4. **Joints :** These are the places where the two bones meet.
5. **Ribs :** These are the twelve pairs of thin and curved bones.
6. **Girdles :** These are the places where limbs are joined to the backbone.

E. Answer the following questions :

Ans.

1. Insects have six legs to walk. Ants and cockroaches crawl using their legs. Some insects like the grasshopper hop with their strong hindlimbs. Some insects can fly. They have wings made of tiny scales. They move their wings with the help of their chest muscles.
2. A daily diet that provides all the nutrients in the right amount, is called a balanced diet. When one does not get a balanced diet, one may fall sick and become weak.
3. Actions are automatic and are controlled by the spinal cord. For example, when our finger comes too close to a hot object, say a hot iron, the sensory nerves quickly pass a message to the spinal cord.
4. The different parts of our skeleton are as follows :
   i. The Skull, ii. The backbone, iii. Two pairs of limbs, iv. Two pairs of girdles.
5. A food chain is a sequence of living thing living in a particular region, in which each living this is food for the next member in the sequence. Such as, a deer eats plants as food and a lion eats a deer as its food.
6. Plants provide us food, medicines, clothes, etc.
7. Seeds should be dispersed because the lack of dispersal will prevent all the seeds from growing. The agents of dispersal are : Wind, weather, men, animals, birds, explosion.

Unit 3 : Materials and Ideas

7

Safety and First Aid

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (c) 2. (a).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans.

1. To help someone with a sprain I would wind a crepe bandage around the joint to prevent unnecessary movement and give support to the joint.
2. This is because water is a good conductor of electricity and can give the person an electric shock.
3. This is 80 because it can cause infections.

B. Encircle the odd one :

Ans.

1. Cotton, Dettol, (Vaccine,) Tournignet
2. Sprain, Burn, (Growth,) Fracture
3. Jumping on the benches, Touching hot iron, (Using zebra crossing)

C. What will happen in the following situations?

Ans. 1. It can make the poison reach his heart with the blood. It can result in his death.
2. It can give an electric shock to the person throwing the water.
3. He can be infected by a deadly disease called rabies.

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. Use the **zebra** crossing to cross the road.
2. In case of heavy bleeding, sit with your head **held back.**
3. A **fracture** is a breaking of a bone.
4. In case of heavy bleeding, use **torniquet.**
5. Except **earthquake** all natural disasters can be predicted.
6. Splint gives **support** to the broken bone.

E. Write True or False :

Ans. 1. False 2. False 3. True 4. False 5. True 6. True.

F. Give reason for the following :

Ans. 1. This will prevent us from taking the things that might be injurious to us.
2. This will wash off all the germs that might make us unhealthy.
3. Fractured parts should not be moved as it can prove too harmful to them. Thus, we use splints, which prevent the movement infracture parts.
4. The saliva of a dog might contains the germs of rabies a deadly disease. As such we should wash a dog bite with soap and water to remove all such germs.

G. Match the following :

Ans.

1. Teasing animal	a. cuts
2. Playing with a knife	b. burns
3. Bursting crackers in hands	c. animal bite
4. Playing on the road side	d. bruises
5. Touching the live wire	e. road accident
6. Hand blow	f. electric current

H. Answer the following questions :

Ans. 1. First aid is the immediate help given to a sick or an injured person. It is very important as it can :
save a life relieve pain till the doctor arrives
prevent the condition of the victim from getting worse.

2. To help some one with a bleeding nose, I would :
Keep him upright in comfortable position, with his head held back.
Ask him to put a wet handkerchief over the nose until the bleeding steps.

3. A will treat as insect bite by washing the wound with an antiseptic soap and clean water.

4. To help a person who has got a fracture in his arm I will make a sling of a triangular cloth to be used as a support. This will prevent the movement of the broken bone.

5. The safety rules to be followed while crossing the road are as following :
Do not run on the road.
USe the zebra-crossing to cross the road.

6. In case of a cut or wound, following first-aid should be given :
Wash your hands before giving first aid, as germs from dirty hands may infect the wound.
If the cut is minor clean it with soap and plenty of water. Dry it and apply on antiseptic cream or put a band-aid over the wound.
To stop the bleeding from severe cuts first wash it with soap and water. Take some cotton, wool or make a thick pad of sterile guaze and press it over the wound. Then tie it tightly with a bandage.
Consult a doctor for the treatment.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

8 Simple Machines

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (b) 2. (b) 3. (a).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. The most common use of a pulley is to fetch water from a well. The pot of water is pulled upward by pulling the rape downward.

2. They are used to lift wheels for changing type or repairing.

3. i. Inclined plane ii. Pulley iii. Screw iv. Wedge v. Lever vi. Wheel and Axle.

B. Which simple machine principle is used in the following?

Ans. 1. Flyover **Inclined plane**

2. Rolling up of a bamboo curtain **Pulley**

3. Machine used to lift cars **Screw**

4. A spoon used to open a tin **Lever**

5. A rolling pin for preparing chapatis **Inclined**

C. Classify the following machines and fill in the table :

Ans.

Inclined plane	Lever	Wedge	Pulley	Wheel or Axle
mountain road	bottle opener	spear	curtain rod wheels	
Slope	tweezer	pin		wheel of a plane
Stairs	scissors	knife		tap knob
		blade		egg beater
		nail		

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. A slide is shaped like a/an **inclined plane.**

2. To draw water from a well, a **pulley** is used.

3. In a lever, if the effort is between the fulcrum and the load it is a **third** class.

4. A **simple** machine has very few parts in it.

5. In a nut cracker, the **load** lies between the **fulcrum** and the **effort.**

E. Write True or False :

Ans. 1. False 2. False 3. True 4. False 5. True.

F. List four activities in each column :

Ans.

1. Playing bat and ball with our hands.
2. Watching television with our eyes.
3. Hearing music with our ears.
4. Kicking a ball with foot.

1. Cutting a cloth with scissors.
2. Opening the led of a can with a spoon.
3. Cracking a nut with a nut cracker.
4. Cutting an apple with a knife.

G. Answer the following questions :

Ans. 1. A simple machine consists of one or two part of machine. It is used to a specific work. A complex machine contains several simple machines. It is used to many kinds of work.
2. Levers are divided into the following three categories :
First class levers, Second class levers and Third class levers.
3. Hospitals are provided with inclined planes or ramps to make it easy for the hospital staff to carry a patient to the hospital on a wheel chair or stretcher.
4. Wheel and pulleys make it easy for us to left or lower an object with less efforts.
5. An inclined plane is a slope. It helps to move a heavy load with lesser effort.

Section 3 Activity (CCE Pattern)

Study the following illustration and answer the questions :

Ans. 1. It is a simple machine.
2. It is a second class lever.
3. Region A.

Unit 4 : Space and Environment

9 Moon and Satellites

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (a) 2. (b) 3. (a) 4. (b) 5. (c).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. The universe is commonly defined as the totality of existence including planets, stars, galaxies, the contents of space and all matter and energy.
2. The moon shine because it reflects the light of the sun.
3. This is so because the gravitation force exerted by the moon is much smaller than that exerted by the earth.

B. Encircle the odd one :

Ans. 1. Solar eclipse Day eclipse Universal eclipse (Lunar eclipse)
2. (Rakesh Sharma) Michael Collins Neil Armstrong Edwin Aldrin
3. Mercury (Moon) Saturn Venus

C. Name the first :

Ans. 1. Woman to go into space. **Valentina Treshkov**
2. Traveller in space. **Laika**
3. Man to step on the moon. **Neil Armstrong**
4. Man to travel round the earth in space. **Major Yuri Gagarin**
5. Indian to became an astronaut. **Rakesh Sharma**
6. Man-made spacecraft or satellite. **Sputnik-I**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. The first traveller in space was a **white dog.**
2. Space begins where the **Earth's** atmosphere ends.
3. The **shadow** of the earth causes a lunar eclipse.

4. India launched Chandrayaan-I in **2008.**
5. **Neil Armstrong** was the first man to step on the surface of the moon.
6. The moon reflects the light of the **sun.**
7. A lunar eclipse falls on a certain **full** moon light.

E. Write True or False :

Ans. 1. True 2. True 3. False 4. False 5. True.

F. Define the following :

Ans.
1. **Eclipse :** It is the total or partial obscuration of the light of the sun or the moon.
2. **Lunar eclipse :** It takes place when the earth comes in between the sun and the moon and casts to shadow on the moon. Due to this we don't see the moon.
3. **Solar eclipse :** It takes place when the moon comes in between the sun and the earth and casts its shadow on the sun. Due to this we don't see the sun.
4. **Satellite :** It a natural body in space orbiting round a larger body.
5. **Artificial satellite :** It is a man-made object sent from the earth to carry out a specific purpose.

G. Answer the following questions :

Ans.
1. There is no sound on the moon because there is no air to transmit the sound.
2. There is no atmosphere on the moon to keep back the heat of the sun. As such during the day the temperature become unbearable high and during the night unbearable cold.
3. We do not see the shadows of the birds of flying very high in the sky because the distance between the source of light, sun and bird is very large. Also the distance between the bird and the earth is large. The shadow of the bird ends up at a short distance and is not seen on the earth.
4. Sometimes the moon comes in between the sun and the earth while revolving around the Earth. Due to this the light from the sun cannot reach the earth. At this time we say that the solar eclipse is taking place.
5. When the shadow of the 'fall on a part of the moon to obstruct the light coming from it, we have a partial lunar eclipse.
6. The astronauts entered the lunar module from the door.
7. Artificial satellites have the following uses :
   i. They send weather reports and enable us to make weather forecast.
   ii. They send live telecast of events on TV to distant places.
   iii. They help us to know about mineral reserves under the surface of the earth.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

Formative Assessment-3

A. Answer the following orally :

Ans.
1. It is used to left wheels for changing tyre or repairing.
2. This is because water is a good conducted of electricity and can give the person an electric shock.
3. The moon shine because it reflects the light of the sun.

B. Tick (✓) the correct answer :

Ans. 1. b. 2. c. 3. c.

C. Encircle the odd one :

Ans.

1.	Cotton,	Dettol,	Vaccine,	Torniquet
2.	Mercury,	Moon,	Saturn,	Venus
3.	Pulley,	Wheel and axle,	Wedge,	Energy

D. Name the following :

Ans. 1. Man-made spacecraft or satellite **Artificial satellite**

2. Traveller in space — **Astronaut**
3. Man to travel round the earth in space — **Major Yuri Gagarin**
4. Woman to go into space — **Valetia Treshkov**
5. Man to step on the moon — **Neil Armstrong**
6. Indian to become an astronaut — **Rakesh Sharma**

E. What will happen in the following situations?

Ans. 1. It will the person doing so an electric shock.
2. It will give him an electric shock.
3. It can make the poison reach his heart with the blood. It can result in his death.
4. It will relieve the pain of the sprain.
5. He can be infected by a deadly disease called rabies.

10 Atmosphere : Our Life Supports

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (c) 2. (a) 3. (b) 4. (c)

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. The gravitational force exerts by the earth makes the atmosphere attached to its surface.
2. This is so because they keep the environment clean.
3. This is because sea water is salty in taste.

B. Encircle the odd one :

Ans. 1. Oxygen, Carbon dioxide, (Dust,) Nitrogen
2. Sedimentation, Decantation, Filtration, (Boiling)
3. Smoke, Harmful gases, Dust, (Oxygen)

C. Identify the gas and give its percentage in the air :

Ans. 1. More than three quarters of air is me. **Nitrogen78.08%**
2. Plants need me to prepare food. **Carbon dioxide0.03%**
3. I am used to produce organ glow in electric tube lights. **Neon0.95%**
4. When you breathe, you make use of me. **Oxygen20.94%**

D. Encircle the correct answer :

Ans. 1. The ozone layer is located in the (stratosphere/troposphere).
2. There are four/(five) layers in the atmosphere.
3. (Nitrogen/oxygen) is present in the maximum quantity in the air.
4. Water should be boiled for at least (10 minutes/30 minutes) to make it suitable for drinking.
5. Soluble impurities can be removed by (decantation/distillation).
6. Insoluble impurities can be removed by filtration/(evaporation).

Section 2 Summative Assessment (CCE Pattern)

E. Fill in the blanks :

Ans. 1. Amount of water vapour contained in air is called **humidity.**
2. **Oxygen** helps is burning something.
3. Anything that has weight **exerts** pressure.

4. Neon gas is used in glowing neon **sign boards.**
5. Air pressure can be transferred in all **directions.**
6. Water can not be lifted more than **10^{34}** centimetres.
7. Ozone is found in the **Stratosphere** layer.
8. Moving air has **force** and it can push things.

F. Match the following columns :

Ans.

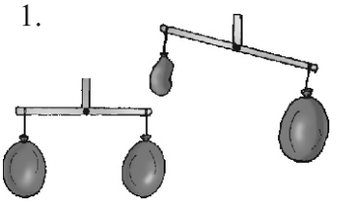
1. Exosphere	a. jet planes fly here
2. Ionosphere	b. outermost layer
3. Thermosphere	c. responsible for weather changes
4. Mesosphere	d. hot layer
5. Stratosphere	e. reflects back radio signals
6. Troposphere	f. cold layer

G. Write True or False :

Ans. 1. False 2. False 3. True 4. False 5. False 6. True.

H. Draw diagram to show :

Ans. 1.



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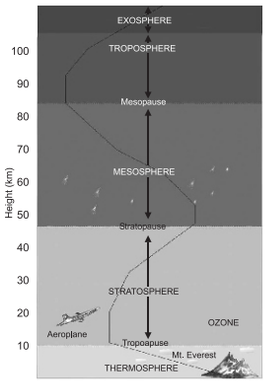


3.

I. Answer the following questions :

Ans.

1. The ozone layer is very useful for us because it protects us from the harmful ultraviolet rays of the sun which can even cause skin cancer.
2. The blanket of air that surrounds the earth is called atmosphere. Air is a mixture of several gases. The major components of air are nitrogen (78.08%), oxygen (20.94%), carbon dioxide (0.03%), neon and organ (0.95%).
3. Common properties of air are :
   i. Air occupies space ii. Air has weight iii. Air exerts pressure
4. A liquid medicine enter in a syringe with the help of the air pressure.
5. When we press the rubber bulb, air is pushed out and escape out through the liquid as bubbles. As the bulb is released, air pressure forces the liquid to enter the dropper.
6. Soluble impurities are the impurities which dissolve in water. They can be removed from water by the methods of evaporation and distillation. Insoluble impurities are the impurities which do not dissolve in water. They are removed by different methods like filtration, sedimentation and decantation.
7. The properties of water are as follows :

(i) Pure water has no colour, taste or colour.
(ii) Water is a very good solvent as it dissolves many things. It is called universal solvent.
(iii) Water can absorb a lot of heat. That is why water is valuable to industries. It is also used as a coolant in vehicles.
(iv) Water tends to clump in drops. That is why it can move through the roots and stem of plants and through the tiny blood vessels of our body.
(v) Water is the only natural substance that is found in all three states of matterliquid (water), solid (ice) and gas (steam).

8. To get pure water using this method, we heat water containing insoluble impurities in a distillation flask. When the water evaporates we allow the water vapour to pass through a condenser. When the water

vapour cools, pure distilled water collects in the condenser. We keep the condenser cool by running water as shown in the figure. Insoluble impurities settle down at the bottom of the flask.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

Unit 5 : Natural Resources

11 Rocks and Minerals

Multiple Choice Questions (MCQs) CCE Pattern

Tick (✓) the correct answer :

Ans. 1. (c) 2. (b) 3. (b) 4. (a).

Section 1 Formative Assessment (CCE Pattern)

A. Answer the following questions orally :

Ans. 1. Pumice have sponge like surface because while cooling the gases in the froth are trapped inside.
2. Diamond.
3. Solar energy is a renewable source of energy. It is available in plenty. It is a pollution free source of energy. Thus, it has many advantages over fuels like coal and petroleum.

B. Listed below are some rocks. Write 'I' for igneous, 'S' for sedimentary and 'M' for metamorphic :

Ans.

Gneiss	**M**	Limestone	**S**
Granite	**I**	Slate	**M**
Marble	**M**	Basalt	**I**
Pumice	**I**	Coal	**S**
Conglomerate	**S**	Sandstone	**S**
Shale	**S**	Quartzite	**M**

C. Name the following :

Ans.

1. Natural non-living substance.	**Rocks**
2. The hot liquid rock in underground pockets.	**Magma**
3. A rock that has been changed.	**Metamorphic**
4. Traces of ancient life in between the layers of rocks.	**Fossils**
5. Polished stones used for making jewellery.	**Gemstones**

Section 2 Summative Assessment (CCE Pattern)

D. Fill in the blanks :

Ans. 1. **Lava** is formed when magma cools slowly **above** the ground.
2. **Slate** is used to make tiles for roofs.
3. **Coal** is formed from trees and other plants which died millions of years ago.
4. **Wells** are dug deep under the ground to get petroleum.
5. **Minerals** are dug out from mines as ores.

E. Match the two columns :

Ans.

1. Lava	d. igneous rocks
2. Ruby	a. gem stone
3. Marble	e. formed from limestone
4. Coal	c. a fuel
5. Sedimentary rocks	f. formed in layers
6. Slate	b. formed from shale

F. Differentiate between :

Ans. 1. **Magma :** When the rock is liquid and it is inside the Earth, it is caused magma.

Lava : When the magma comes out to the Earth's surface and flows out, it is called lava.

2. **Granite :** It is formed when magma cooled down slowly under the Earth's surface.

Pumice : It is formed when lava cooled down quickly on the Earth's surface.

3. **Igneous rocks :** These are the primary rocks found on the Earth. There are formed by the cooling down of magma or lava.

Sedimentary rocks : These are formed from pebbles, sand, mud, or clay that are deposited in oceans.

4. **Marble :** It is formed when limestone undergoes several changes. It can be carved and polished easily.

Limestone : It is made of a mineral 'calcite' which is present in the shells of sea animals.

G. Answer the following questions :

Ans. 1. A mineral is a substance from which rocks are made up of.

2. Sedimentary rocks are formed from the igneous rocks. They are formed by the deposition of sediments layer upon layer.

3. Meta morphic rock means rock that has changed. Igneous or sedimentary rocks change into metamorphic rock. Powerful forces like heat and pressure bring about changes in rocks.

4. Igneous rocks are formed from magma, the hot molten material found deep inside the Earth. The intense pressure inside the Earth pushes the magma cools just below the Earth's surface. It then hardens to form igneous rocks.

5. Rocks are useful to us in the following ways :

   1. Rocks (minerals) also give us useful metals like platinum, gold, silver, copper, zinc, nickel, aluminium and iron etc. Metals are used for jewellery, coins, internet, wire, aeroplanes, machines, furniture and rails.

   2. Minerals like sulphates, nitrates, phosphates and salts of potassium form important fertilizers. They are essential for good growth of plants.

   4. Rocks like marbles, sandstone and granite are used for making buildings and paving roads. The Taj Mahal of Agra is made of marble. The Red Fort at Delhi and Agra are made of red sandstone. Granite temples and statues have been made in South India. Marble temples and statues have been made in North India.

6. Coal is formed from the dead remains of plants that fill into the swamps many millions of years ago. The plants were trapped under the water and did not decay completely. The heavy layers formed a material called peat. Dirt, sand and clay covered the layers of peat. Over time, heat and pressure caused the peat to become rich carbon deposits. After millions of years, these carbon deposits formed cool.

   There are four types of coal : peat, lignite, bituminous and anthracite.

7. Coal is a very important fuel for us as demand for energy has been rising. Coal is used in power station to generate electricity and to make steam in steam engines. It is used as a raw material and fuel in many industries like steel plant.

   Petroleum is refined in refineries to give cooking gas, petrol, diesel, kerosene, lubricants, vaseline, wax, asphalt etc. Petrol is used in running motor-cycles and cars. Diesel is used in trains and buses. Petrol is used for dry cleaning our woollen clothes. Many chemicals which come from coal and petroleum, help to make nylon, plastics, fertilizers, medicines, perfumes, cosmetics, colour dyes etc.

8. Fossils are the traces of ancient plant and animal life found in sedimentary rocks.

   The fuels which originated from the fossils trapped in the rocks are called fossil fuels. Coal and petroleum are major fossil fuels.

Section 3 Activity (CCE Pattern)

Ans. Do it yourself.

Formative Assessment-3

A. Answer the following questions orally :

Ans.
1. The gravitational force exerts by the earth makes the atmosphere attached to its surface.
2. This is so because they keep the environment clean.
3. Solar energy is a renewable source of energy. It is available in plenty. It is a pollution free source of energy. Thus, it has many advantages over fuels like coal and petroleum.

B. Tick (✓) the correct answer :

Ans. 1. c. 2. c. 3. a. 4. b.

C. Encircle the odd one :

Ans.

1.	Oxygen,	Carbon dioxide,	Dust,	Nitrogen
2.	Sedimentation,	Decantation,	Filtration,	Boiling
3.	Smoke,	Harmful gases,	Dust,	Oxygen

D. Identify the gas and give its percentage in the air :

Ans.
1. Plants need me to prepare food. **Carbon dioxide0.03%**
2. When you breathe, you make us of me. **Oxygen20.94%**
3. More than three quarters of air is me. **Nitrogen78.08%**
4. I am used to produce orange glow in electric tube lights. **Neon0.95%**

E. Listed below are some rocks. Write 'I' for igneous 'S' for sedimentary and 'M' for metamorphic :

Ans.

Slate	**M**	Conglomerate	**S**
Shale	**S**	Coal	**S**
Pumice	**I**	Basalt	**I**
Gneiss	**M**	Marble	**M**
Sandstone	**S**	Limestone	**S**
Granite	**I**	Quartzite	**M**

Summative Assessment-2

A. Fill in the blanks :

Ans.
1. To draw water from a well, a **pulley** is used.
2. India launched Chandrayaan-I in **2008.**
3. Use the **zebra** crossing to cross the road.
4. Moving air has **force** and it can push things.
5. **Coal** is formed from trees and other plants which died millions of years ago.

B. Write True or False :

Ans. 1. True 2. False 3. True 4. True 5. False.

C. Match the following and write two examples for each :

Ans.

1. Ionosphere	d. Reflects back radio signals
2. Playing with a knife	e. Cuts
3. Scissors	a. First class lever
4. Diamond	b. Gemstone
5. New Moon	c. Moon not visible

D. Differentiate between :

Ans. **1. Magma :** When the rock is liquid and it is inside the Earth, it is caused magma.
Lava : When the magma comes out to the Earth's surface and flows out, it is called lava.

2. **Granite :** It is formed when magma cooled down slowly under the Earth's surface.
   Pumice : It is formed when lava cooled down quickly on the Earth's surface.
3. **Igneous rocks :** These are the primary rocks found on the Earth. There are formed by the cooling down of magma or lava.
   Sedimentary rocks : These are formed from pebbles, sand, mud, or clay that are deposited in oceans.
4. **Marble :** It is formed when limestone undergoes several changes. It can be carved and polished easily.
   Limestone : It is made of a mineral 'calcite' which is present in the shells of sea animals.

E. Answer the following questions :

Ans. 1. I will treat an insect bite by washing the wound with an anteseptic soap and clean water.

2. Coal is formed from the dead remains of plants that fill into the swamps many millions of years ago. The plant were trapped under the water and did not decay completely. The heavy layers formed a material called **peat**. Dirt, sand and clay covered the layers of peat. Over time, heat and pressure caused the peat to become rich carbon deposits. After millions of years, these carbon deposits formed coal. There are four types of coal : peat, lignite, bituminous and anthracite.

3. Fossils are the traces of ancient plant and animal life found in sedimentary rocks.
   The fuels which originated from the fossils trapped in the rocks are called fossil fuels. Coal and petroleum are major fossil fuels.

4. **i. Lunar eclipse :** It takes place when the earth comes in between the sun and the moon and casts to shadow on the moon. Due to this we don't see the moon.

ii. Solar eclipse : It takes place when the moon comes in between the sun and the earth and casts its shadow on the sun. Due to this we don't see the sun.

5. Artificial satellites have the following uses :

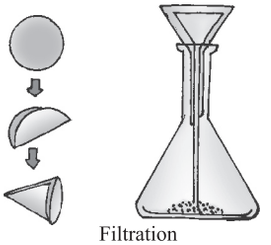
i. They send weather reports and enable us to make weather forecast.

ii. They send live telecast of events on TV to distant places.

iii. They help us to know about mineral reserves under the surface of the earth.

6. **i. Distillation :** To get pure water using this method, we heat water containing insoluble impurities in a distillation flask. When the water evaporates we allow the water vapour to pass through a condenser. When the water vapour cools, pure distilled water clothes in the condenser. We keep the condenser cool by running water as shown in figure. Insoluble impurities settle down at the bottom of the flask.

ii. Filtration : Fold a sheet of filter paper into half and then into quarters as shown in the figure. It takes the shape of a cone when we open it. Place it in a funnel as shown in the figure. Place the funnel with the conical filter paper inside it on the mouth of a bottle. Now, pour some sandy water into the funnel. What do you see? Clean water collects in the glass and sand particles stay on the filter paper. This process of pouring water through a filter that allows water to pass but not solid particles is called filtration.



Filtration

iii. Decentation : This processes done after the process of sedimentation. In it the solution (clean water) is poured into another slowly leaving behind the impurities in first glass.