



Science and Technology-V (Solution)

CHAPTER 1 : PLANTS REPRODUCTION

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. The different part of seeds are seed coat, epicotyl, plumule, hypocotyl, radicle and cotyledons.
2. When the insects visit another flower of the same type some pollen gets stuck on the stigma of that flower. This transfer of pollen from one flower to another is called pollination. (Diagram : Pollination, do yourself).
3. A seed need to germinate into seedling only in the presence of air, water and sunlight. All these conditions are found in moist soil. In such conditions, a seed absorbs water from the soil. This water starts breaking down of food inside the seed to produce energy. Now the seed-coat cracks and the tiny plant comes out.
4. Petals able to attract insects, bees and butterflies because of their bright colour and attractive scent.
5. Pollination is the transfer of pollen from one flower to another flower. The agents of pollination are insects, honeybees, butterflies, wind, water, animals and fruits.
6. The process by which natural agents scatter, carry the seeds or fruits away from their parent plant is known as dispersal of seed.
7. Animals helps in dispersals of seed like they eat fruits like mangoes, tomatoes and cherries and throw away their seeds here and there. Birds swallow some seeds which come out unchanged in their droppings. Squirrels collect nuts and burg them to get back during winter, but they forget where they buried them and due to these activities of animals dispersal of seeds takes place.
8. The crops are dividing into two parts according to the seasons are kharif crops and rabi crops. Crops like rice, maize, jowar, bajra are grown june to october in summer seasons known as kharif crops and crops like wheat, mustard, lentils and gram are grown from november to april in winter season known as Rabi crops.

(C) Fill in the blanks with the words given below :

1. Water 2. sugarcane 3. stigma 4. styles 5. ovule

(D) Say whether the following statements are 'True and False' :

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

(E) Give one-word answer of each :

1. Nectar 2. Rice, Maize 3. Petals 4. Wheat 5. Cotton

Sharpen your vocabulary

(A) Match the following :

1. Cotton seeds - dispersed by wind.

2. Pea seeds - dispersed by explosions.
3. Coconut seeds - dispersed by water.
4. Mango seeds - dispersed by animal.

(B) Give two examples each of :

- | | | |
|--------------------|-------------------|----------------|
| 1. Sugarcane, Rose | 2. Geranium, Peas | 3. Rice, Maize |
| 4. Wheat, Mustard | 5. Potato, Carrot | |

Activity

(A) Collect different types of seeds. Put them into polythene bags and attach them in your scrapbook :

Do himself

(B) Buy seeds of some flower plants like pansy. Sow them in pots and grow. Give them to your friend or your teacher.

Do himself

CHAPTER 2 : ADAPTATION IN PLANTS

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

- | | | | | |
|--------|--------|--------|--------|--------|
| 1. (c) | 2. (c) | 3. (b) | 4. (c) | 5. (a) |
|--------|--------|--------|--------|--------|

(B) Answer the following questions :

1. An animals body covering is an important visible adaptation. Body covering help to protect animals in diversing environments from lands to water and from arctic to desert. There are different types of body coverings are :
 - (a) Scales : Bodies of crocodiles, fish etc are covered with scales.
 - (b) Shell : Bodies of tortoise and turtle are covered with shell.
 - (c) Feathers : Bodies of birds are covered with brightly coloured feathers.
 - (d) Fur : Bodies of sheep, bear, dog and tiger are covered with fur.
2. Webbed foot helps the animal by push water back while swim and also their strong hind legs help them to jump on land.
3. The movement of animal from one place to another is called "locomotion". The word locomotion means "moving from one place to another."
4. The following animals breathe by :
Fish : gills, Insects : Spiracles
5. Water animals have fins and a powerful tail which help them to move in water and to keep their balance. The fish have two paired fins help to turn and move forward slowly. The unpaired fin maintains balance and the tail fin is used to change the direction as it moves.
6. Human beings have two parts of limbs. They use their limbs regularly like their legs are used for standing, running and walking and their hands are used for holding and working with objects.
7. Some animals move from one region to another region due to climatic changes. So this seasonal movement is called migration.

(C) Fill in the blanks with the words given below :

- | | | | | |
|----------|------------|---------------|-----------|---------------|
| 1. lungs | 2. tadpole | 3. locomotion | 4. snakes | 5. herbivores |
|----------|------------|---------------|-----------|---------------|

(D) Say whether the following statements are 'True and False' :

- | | | | | |
|---------|----------|----------|---------|---------|
| 1. True | 2. False | 3. False | 4. True | 5. True |
|---------|----------|----------|---------|---------|

(E) Circle the odd one out. Justify your choice :

1. cat 2. sparrow 3. fox 4. cat 5. beetle 6. lion

Sharpen your vocabulary

(A) Match the following :

1. Wolf - carnivores 2. Frog - webbed feet
3. Horse - Herbivores 4. Cockroach - spiracles
5. Fish - gills

(B) The three main organs of breathing in animals are :

1. Lungs 2. Gills 3. Spiracles

Activity

- (A) Do himself.
(B) Do himself.
(C) Do himself.
-

CHAPTER 3 : FOOD AND HEALTH

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. We need food to stay alive. It also helps in the growth of the body.
2. A diet that contains the required amount of carbohydrates, fats, proteins, vitamins and minerals. It also contains roughage and water. A balanced diet consists of the right nutrients in the right amounts.
3. The essential nutrient present in the food are carbohydrates, fats, proteins, vitamins and minerals.
4. Communicable diseases are those diseases that can be passed from one person to another by air, water, food etc.
5. Non-communicable diseases are those diseases that cannot be passed from one person to another.
6. Mosquito spreads communicable disease when they bite, germs, enters in our body also when female mosquito sucks the blood of someone suffering from malaria, it sucks the malaria germs also and when it bites someone else, the germs pass into his blood and spreads the disease.
7. The germs of milk can be killed by heating for at least half an hour and then cooled quickly. This kills harmful bacteria of milk. It is called pasteurization.
8. Vaccines are made of small quantities of dead or very weak germs of a particular disease which work in preventing the disease.

(C) Fill in the blanks with the words given below :

1. carbohydrates 2. minerals 3. vitamin D
4. proteins 5. scurvy

(D) Say whether the following statements are 'True and False' :

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

(E) Give any three sources of :

1. wheat, pulses, sugar 2. fruits, vegetable, milk

3. beans, cheese, chicken 4. milk, ghee, meat
5. fruit, milk, cheese

Sharpen your vocabulary

(A) Match the following :

1. Night blindness - deficiency of vitamin A
2. Beriberi - deficiency of vitamin B1
3. Scurvy - deficiency of vitamin C
4. Rickets - deficiency of vitamin D
5. Goitre - deficiency of iodine

Activity

(A) Write five lines on Healthy body :

1. Healthy body helps us to grow better.
2. Healthy body helps us in doing muscular tasks.
3. Healthy body helps us in studying.
4. Healthy body helps us in sports.
5. Healthy body makes our life longer.

(B) Do himself

CHAPTER 4 : SAFETY AND FIRST AID

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. The first and immediate help given to an injured or sick person before proper medical aid arrives is called first aid.
2. In case of bleeding nose keep calm and do not panic. Firstly press the bleeding of the nose and keep the patient with his/her head held back. Then put some cloth or ice pack on his/her head. If your bleeding does not stop, call a doctor.
3. A fracture is a crack or a break in a bone.
4. In case of cut and scratches the first aid is given by person wash his hands, as germs from dirty hands may infect the wound. Wash cut with water. Then clean them with cotton soaked in an antiseptic solution like dettol, cover the cut with a clean bandage and a deep wound must be shown to doctor.
5. Tourniquet is a bandage which is used when cut is very deep and bleeding heavily.
6. In case of minor wounds, the first aid given by person much wash his hand, then clean the wound with cotton soaked in an antiseptic solution like dettol. Cover the wound with a deep bandy.
7. First aid given in our of an animal bite are :
Gently clean with soap and warm water to remove germs.
Apply antiseptic lotion to reduce risk of infection, and cover with a sterile bandage.
Get medical help immediately for any animal bite.
8. Accidents occurs, suddenly due to our carelessness. Some time due to accident people get permanently disabled. Accidents happen when we do not take care to follow safety rules.

(C) Say whether the following statements are 'True and False' :

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

(D) What first aid will you give in the following cases :

1. Apply cold water on the burnt area.
2. Wash wound with soap and water.
3. Apply ice-packs or ice-cubes on injured joint.
4. Keep the patient upright in a comfortable position.
5. Apply a splint to give support to the broken bone.

Sharpen your vocabulary

(A) Match the following :

1.  2.  3.  4.  5.  6.  7. 

Activity

- (A) Do himself
(B) Do himself

FORMATIVE ASSESSMENT-1

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

1. (a) 2. (c) 3. (Iodine) 4. (c)

(B) Answer the following questions :

1. A seed need to germinate into seedling only in the presence of air, water and sunlight. All these conditions are found in moist soil. In such conditions, a seed absorbs water from the soil. This water starts breaking down of food inside the seed to produce energy. Now the seed-coat cracks and the tiny plant comes out.
2. Communicable diseases are those diseases that can be passed from one person to another by air, water, food etc.
3. Animals helps in dispersals of seed as they eat fruits like mangoes, tomatoes and cherries and throw away their seeds here and there. Birds swallow some seeds which come out unchanged in their droppings. Squirrels collect nuts and burg them to get back during winter, but they forget where they buried them and due to these activities of animals dispersal of seeds takes place.
4. Accidents occurs, suddenly due to our carelessness. Some time due to accident people get permanently disabled. Accidents happen when we do not take care to follow safety rules.
5. Tourniquet is a bandage which is used when cut is very deep and bleeding heavily.

(C) Fill in the blanks with the words given below :

1. water 2. vitamin D 3. scurvy 4. traffic-rules 5. locomotion

Activity

- (A) Do himself

CHAPTER 5 : OUR SKELETON SYSTEM

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

- Skeletal system helps our body to move. The skeletal system give shape and support to our body and protect our internal organs.
- A joint is the meeting point of two bones. Which help us to move, bend, run and turn.
- The joints at which bones move freely are called moveable joints. There are four types of moveable joints in our body are :
 - The hinge joint
 - The pivot joint
 - The ball and socket joint
 - The gliding joint
- Difference between movable and immovable joints :

	Moveable	Immovable
1.	The joints at which bones move freely are called moveable joints.	The joints at which bones do not allow any movement are called in movable joint.
2.	Moveable joints are hinge, pivot, ball and socket and gliding joint.	Immovable joints are skull.

- Muscles are the fleshy materials that move different part of our body.
- Some muscles are attached to the bones. They have dark bands and light bands, so they are called stripped muscles. Voluntary muscles attached to our skeleton are under control, so we call them voluntary muscles.
- Muscles not under our control are called involuntary muscles. These muscles are present in the food canal, blood vessels, lungs and bladder. These are also called smooth muscles.
- The two points to keep your bones and muscles strong and fit are :
 - Regular exercise is necessary for proper development of muscles.
 - We should eat proper food like eggs, milk, fruits and green vegetables.

(C) Fill in the blanks with the words given below :

1. organ system 2. femur 3. pivot joint 4. muscles 5. healthy

(D) Say whether the following statements are 'True and False' :

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

(E) Write the name of the joint each of the following :

1. Ball and Socket Joint 2. Hinge Joint 3. Gliding Joint

Sharpen your vocabulary

(A) Match the following :

1. Fore limbs - arms 2. Hind limbs - legs 3. Upper leg - femur
4. Immovable joint - skull 5. Hinge joint - knee

Activity

(A) Do himself

(B) Do himself

CHAPTER 6 : OUR NERVOUS SYSTEM

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. Nerves system are the bundle of fibres that connects the brain with the other parts of the body. Nerves are long thread like structures that carry signals between the brain and the other parts of the body.
2. The spinal cord is a thick cord of nerves tissues. It is as thick as our little finger. It begins at the neck region and continuous down to the lower end of our backbone. The spinal cord transfers the information between the brain and the rest of the body.
3. Nerves are the bundles of fibres that connects the brain with the other part of the body.
4. All signals do not go to the brain. Some signals need immediate or automatic actions, these actions are called reflex actions.
5. The tongue has the small bumps called taste buds which help us to taste.
6. The organs which help us to feel or sense the things around us are called the sense organs. We have five sense organs. These are eyes, ears, nose, tongue and skin. These sense organs help us to see, hear, smell taste and feel.
7. We should take care of our eyes in the following ways are :
 - ☆ Wash your eyes with clean water or fresh water daily.
 - ☆ Do not work in dim light or very bright light.
 - ☆ Do not lie down and read.
 - ☆ Wear sunglasses and hats on bright days.
 - ☆ Never rub your eyes with a dirty towel or dirty hands. This can cause an eye infection.
 - ☆ Get your eyes checked up by an eye doctor if you have a problem in your vision.
8. We should take care of our ears in the following ways are :
 - ☆ Do not let water enter your ears while bathing.
 - ☆ Clean your ears with washed cloth using your fingers.
 - ☆ Never clean your ears with pointed objects.
 - ☆ Never listen loud music for more than two hours straight.
 - ☆ If you have an earache go to doctor immediately.

(C) Fill in the blanks with the words given below :

1. powerful 2. nerve 3. cerebrum 4. iris 5. nose

(D) Say whether the following statements are 'True and False' :

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

(E) Label each of the following pictures :

Do it yourself.

Sharpen your vocabulary

(A) Match the following :

- | | |
|----------------------------|----------------------------|
| 1. Eyes - organ of seeing | 2. Nose - organ of smell |
| 3. Ears - organ of hearing | 4. Skin - organ of feeling |
| 5. Tongue - organ of taste | |

Activity

(A) Solve crossword puzzle through the clues:

1. Tongue 2. Medulla 3. Eye 4. Nose 5. Ear
-

FORMATIVE ASSESSMENT-2

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. The spinal cord is a thick cord of nerves tissues. It is as thick as our little finger. It begins at the neck region and continuous down to the lower end of our backbone. The spinal cord transfers the information between the brain and the rest of the body.
2. All signals do not go to the brain. Some signals need immediate or automatic actions, these actions are called reflex actions.
3. (1) Regular exercise is necessary for proper development of muscles.
(2) We should eat proper food like eggs, milk, fruits and green vegetables.
4. Muscles are the fleshy materials that move different part of our body.
5. We should take care of our eyes in the following ways are :
 - ☆ Wash your eyes with clean water or fresh water daily.
 - ☆ Do not work in dim light or very bright light.
 - ☆ Do not lie down and read.
 - ☆ Wear sunglasses and hats on bright days.
 - ☆ Never rub your eyes with a dirty towel or dirty hands. This can cause an eye infection.

Get your eyes checked up by an eye doctor if you have a problem in your vision.

(C) Fill in the blanks with the words given below :

1. organ system 2. cerebrum 3. healthy 4. muscles 5. iris

Activity

- (A) Do himself.
-

SUMMATIVE ASSESSMENT-1

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. Petals able to attract insects, bees and butterflies because of their bright and attractive scent.
2. Accidents occurs, suddenly due to our carelessness. Some time due to accident people get permanently disabled. Accidents happen when we do not take care to follow safety rules.
3. The joints at which bones move freely are called movable joints. There are four types of movable joints in our body are :
 - (i) The hinge joint

(ii) The pivot joint (iii) The ball and socket joint

(iv) The gliding joint

4. The germs of milk can be killed by heating for at least half an hour and then cooled quickly. This kills harmful bacteria of milk. It is called pasteurization.
5. The organs which help us to feel or sense the things around us are called the sense organs. We have five sense organs. These are eyes, ears, nose, tongue and skin. These sense organs help us to see, hear, smell taste and feel.
6. Microbes are very small things. they can be seen only through a microscope. There are different kind of microbes and bacteria, viruses, fungi and protozoa.

(C) Fill in the blanks with the words given below :

1. traffic-rules 2. femur 3. nerve 4. iris 5. protein

(D) Say whether the following statements are 'True and False' :

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

(E) Match the following :

1. Cotton seeds - dispersed by wind
2. Pea seed - dispersed by explosions
3. Coconut seeds - dispersed by water
4. Mango seeds - dispersed by animal

(F) Write the name of the joint each of the following :

1. Ball and socket joint 2. Hinge joint 3. Gliding joint

Activity

(A) Write five on healthy body :

1. Healthy body helps us to grow better.
2. Healthy body helps us in doing muscular tasks.
3. Healthy body helps us in studying.
4. Healthy body helps us in sports.
5. Healthy body makes our life longer.

Chapter 7 : Force, Work and Energy

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. Force can be defined as a push or a pull. An object moves when it is pulled or pushed.
2. The three types of forces are :
 - (a) **Muscular force :** The force used by the muscles of the body is called muscular force. The horses pull cart due to the muscular force. Humans and animals use muscular force to move things or to change their direction.
 - (b) **Gravitational force :** The force by which the earth pulls an object towards it is called gravitational force. Gravity is the force that can only pull and cannot push.
 - (c) **Frictional force :** Friction is the force present when two things are in contact with each other. It is always in a direction that stops the movement.
3. Muscular force are the force used by the muscles of the body is called muscular force. Stretching a rubber bond with finger and pushing a mug into water are examples of muscular force.

4. When we apply force on any object and it moves through a distance, we say that work is done.

$$\text{Work} = \text{Force} \times \text{Distance Moved}$$

5. A lever is a simple machine, it is a broad or bar that rests on a turning point.
 6. Energy is the capacity to do work, without energy there would be no life and no movement.
 7. There are different forms of energy. The four different forms of energy are solar energy, muscular energy, wind energy and heat energy.
 8. The law of conservation of energy tell us that energy is very precious. The total amount of energy in the universe always remains the same. It can be transformed from one form to another and we must not waste the different type of energy. We must save them for future and future generations.

(C) **Fill in the blanks with the words given below :**

1. shape 2. load 3. simple machines 4. wedge
 5. electric

(D) **Say whether the following statements are 'True and False' :**

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

Sharpen your vocabulary

(A) **Match the following :**

1. Pulley - water from well
 2. Inclined plane - ramp
 3. Wedge - knife or axe
 4. Screw - bulb
 5. Lever - scissor

(B) **Give two examples of each machine :**

1. Pilers, Scissors 2. Ramp, Slide 3. Roller skates, clocks

Activity

- (A) Do himself (B) Do himself.

CHAPTER 8 : SOLID, LIQUID AND GASES

(A) **Multiple Choice Questions (MCQ)**

Tick (✓) the correct answer :

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

(B) **Answer the following questions :**

1. Matter is anything that occupies space and has weight. Everything around us is made up of matter only. Matters has its three different forms are solid, liquid and gas.
 2. The molecules are made up of atoms.
 3. All matter is made up of very tiny particles called atom. Atoms are the building blocks of matter.
 4. There are two differences between liquid and gas :

	Liquid	Gas
1.	The molecules in liquid are loosely packed.	The molecules in gas are very loosely packed.

2.	Liquid have no fixed shape but have fixed volume.	Gas have no fixed shape nor a fixed volume.
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- The molecules of solids are very close to each other. They attract each other with great force. Hence, they occupy a definite space. They are hard to touch.
- When the matter changes from its state without forming a new substance is called physical change. For example, coconut oil becomes solid in winter, and changes back to liquid in summer. Water becomes ice when cooled, and changes back to water when heated.
- The change in which a substance changes its state giving rise to a new substance that is entirely different from the original one is called the chemical change.
- Difference between physical change and chemical changes are :

	Physical Change	Chemical Change
1.	When matter changes its state without forming a new substance.	When a substance changes its state and give rise to a new substance.
2.	Physical change can be reversed back.	Chemical change cannot reversed back.
3.	Examples of physical change are : Water, solid, coconut oil.	Examples of chemical changes are burning of a paper.

(C) Fill in the blanks with the words given below :

1. molecule 2. water 3. motion 4. chemical 5. gases

(D) Say whether the following statements are 'True and False' :

1. false 2. false 3. true 4. true 5. false

Sharpen your vocabulary

(A) Match the following :

- Water - change in three states of matter
- Molecule - very tiny particles
- Liquid - molecules are loosely packed
- Solid - molecules are very close
- Gas - molecules are very loosely packed

(B) What is the difference between :

- A solid and a gas :

	A Solid	A Gas
1.	The molecules of a solid are very close to each other.	The molecules of a gas very loosely packed.
2.	Molecules of solid occupies a definite space.	Molecules of gases have neither a fixed shape nor a fixed volume.

- A molecule and an atom

	A Molecule	An Atom
1.	A matter is made up of very tiny particles called molecules.	A molecule is also made up of very tiny particles called atom.

2.	Molecules group together and forms a matter.	Atoms group together and forms an atom.
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3. A liquid and a solid

	A Liquid	A Solid
1.	The molecules of a liquid are loosely packed.	The molecules of a solid are very close to each other.
2.	Liquid have no fixed shape.	A solid has a fixed shape.

4. Physical and chemical change

	Physical Change	Chemical Change
1.	When matter changes its state without forming a new substance.	When a substance changes its state and give rise to a new substance.
2.	Physical change can be reversed back.	Chemical change cannot reversed back.
3.	Examples of physical change are : Water, solid, coconut oil.	Examples of chemical changes are burning of a paper.

Activity

- (A) You know that molecules are very small particles. But they are not the smallest. If you solve the following puzzle, you will get the name of the smallest particles.**
ATOMS

CHAPTER 9 : ROCKS AND MINERALS

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

- Rocks are found everywhere : on a high mountains, riverbed, canyons and floors of the deep oceans.
- Rocks are formed over a period of thousand or more years. According to their formation. There are three types of rocks and igneous rock, sedimentary rocks and metamorphic rocks.
- Igneous rocks are the oldest types of rocks. Igenous means “made from fire or heat”. These types of rocks are formed deep inside the earth.
- A major portion of earth surface is covered with sedimentary rocks. The earth surface is constantly croded or worn away and carried by wind, water and ice. Weathering of rocks taken place due to sun, wind or rain. The rocks then break into smaller pieces. When these small pieces set together us called sediments. As the layers of the sediments settled down on top of each other, their weight squeezes the piece together. As the oldest layer pressed down more and more over a long time. Over many years these layers became hardened and converted to sedimentary rock. The examples of sedimentary rocks are conglomerates, limestone, sandstone and shale.
- The granite is used in bridges and buildings and also it used for long-lasting monuments and for decoration on buildings.

6. Naturally occurring substances. All rocks are made up of one or more minerals.
7. Coal and petroleum are very important for us. Because coal and petroleum are non-recycle. Coal are mainly used for cooking, in factories and for running steam engines and petroleum are mainly used for fules in vehicles.
8. The three petroleum products are dry cleaning, making lubricating oil and printing ink.
 - (a) Petroleum used in dry cleaning, when the clothes gets spot or old then dry cleaning helps the clothes to came into their original form.
 - (b) Petroleum are used in making lubricating oil which helps in our vehicles to run smoothly.
 - (c) Petroleum is used in printing ink and these inks help us in printing novels, books and newspapers.

(C) **Fill in the blanks with the words given below :**

1. rocks 2. grey 3. obisidian 4. metamorphic 5. coal

(D) **Say whether the following statements are 'True and False' :**

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

Sharpen your vocabulary

(A) **Match the following :**

- | | |
|---------------------------------|---------------------------------|
| 1. Basalt - Igneous Rock | 2. Slate - Metamorphic Rock |
| 3. Sandstone - Sedimentary Rock | 4. Topaz - Non-metallic mineral |
| 5. Gold - Metallic Mineral | |

Activity

(A) **Find five rocks name in the puzzle box. One is done for you :**

Slate, Basalt, Granite, Marble, Pumice

(B) **Collect samples of rocks and minerals in small polybag. Label them and display in your classroom.**

Do himself

CHAPTER 10 : AIR AND WATER

(A) **Multiple Choice Questions (MCQ)**

Tick (✓) the correct answer :

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

(B) **Answer the following questions :**

1. The earth is surrounded by a thick layer of air is called an atmosphere.
2. Air contains about 79% of Nitrogen, about one-fifth (20%) of the air is oxygen. Other gases such as carbon dioxide, argon, hydrogen, ozone, helium, neon etc. are only 1% of the air. Carbon dioxide is only 0.03% of the air. Besides these gases, air also contains dust, smoke and water vapour.
3. The different layers of the atmosphere are troposphere, stratosphere, mesosphere, thermosphere and exosphere.
4. Air is very important for us. Some uses of air are :
 - (i) Air is needed all living beings to breathe.
 - (ii) Air contains oxygen which is needed for burning.
 - (iii) Air is used to inflate tubes of vehicles and wind mills.
 - (iv) Moving air can support parachutes, gliders and kites.
 - (v) Ozone layer present in atmosphere absorb UV-rays.

5. The two main properties are :
 - (i) Air has weight
 - (ii) Air takes up space.
6. The process of removing insoluble impurities present in water by way of leaving undistributed for sometime and then impurities lay down and clear water comes out, this process is called sedimentation.
7. The process of insoluble impurities settle down at the bottom, pour the clear water into another beaker carefully. This process of separating clear water is called decantation.
8. The process of separate the mixture of soil from water by using filter paper. This process is called filtration.

(C) **Fill in the blanks with the words given below :**

1. atmosphere 2. breathe 3. exosphere 4. water 5. rainwater

(D) **Say whether the following statements are 'True and False' :**

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

Sharpen Your Vocabulary

(A) **Match the following :**

1. Oxygen - 20% of the air
2. Nitrogen - 79% of the air
3. Mesosphere - third layer of the atmosphere
4. Thermosphere - fourth layer of the atmosphere
5. Air is - all around the earth

Activity

(A) **Find the names of the five layers of the atmosphere in the crossword :**

1. Thermosphere 2. Exosphere 3. Mesosphere
4. Troposphere 5. Stratosphere

FORMATIVE ASSESSMENT-3

(A) **Multiple Choice Questions (MCQ)**

Tick (✓) the correct answer :

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

(B) **Answer the following questions :**

1. The process of insoluble impurities settle down at the bottom, pour the clear water into another beaker carefully. This process of separating clear water is called decantation.
2. Minerals are found in earth or are naturally occurring substances. All rocks are made up of one or more minerals.
3. When we apply force on any object and it moves through a distance, we say that work is done.

$$\text{Work} = \text{Force} \times \text{Distance Moved}$$

4. All matter is made up of very tiny particles called atom. Atoms are the building blocks of matter.
5. There are different forms of energy. The four different forms of energy are : Solar energy, Muscular energy, Wind energy and Heat energy.

(C) **Fill in the blanks with the words given below :**

1. motion 2. breathe 3. metamorphic 4. chemical 5. rainwater

Activity

- (A) **Collect samples of rocks and minerals in small polybag. Label them and display in your classroom.**

Do himself

CHAPTER 11 : OUR ENVIRONMENT

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. The natural process between the sun, the atmosphere and the earth is called the greenhouse effect.
2. Global warming refers to an average increase in the Earth's temperature, which in turn causes changes in climate.
3. Pollution is the mixing of some harmful or poisonous substance into the natural resources available on the earth.
4. Air get polluted because of the growing number of automobiles, release of poisonous gases, smoke from industrial companies, finely dissolved solids, liquid aerosols, etc. in the atmosphere.
5. Soil pollution is caused by the use of fertilizers, fungicides, insecticides and other organic compounds.
6. We prevent pollution of air and water by some measures are :
 - (i) Use smokeless source of energy like smokeless stoves.
 - (ii) Using devices for filtering smoke in chimneys of factories and power house.
 - (iii) Garbage from houses should not dumped into water.
 - (iv) Dirty water/sewage water should not dumped into large river.
 - (v) Factories should not waste their dump into rivers.
7. The water gets polluted because of harmful wastes from factories, industries, sewage systems, farms etc. which are directly dumping into the main source of water like rivers, lakes and oceans.
8. The three R's are Reduce, Reuse and Recycle.

Reduce : Reduce your needs like don't be greedy live simple life in less things.

Reuse : You have can reuse thing, buy things which can be used again and again over a long period of time.

Recycle : We can recycle some waste materials like paper, metals, clothes, rubbers etc.

(C) Fill in the blanks with the words given below :

1. environment 2. ozone 3. lungs 4. carbon dioxide
5. paper-machine

(D) Say whether the following statements are 'True and False' :

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

Sharpen your vocabulary

(A) Match the following :

1. Water vapour - 35-75% of the green house effect
2. CFC - chloroflouro carbon
3. Reuse - plastic

4. Recycle - paper
5. Planting - more trees

Activity

(A) Write ten lines about the different types of pollution :

Do it yourself

(B) Do it yourself

(C) Do it yourself

CHAPTER 12 : NATURAL CALAMITIES

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. Such events which cause damage to human life and property and which occur naturally are called natural calamities.
2. Some natural calamities are earthquake, volcanoes, tidalwaves, floods and droughts.
3. An earthquake is a sudden shaking of the ground caused by the movements or vibrations deep inside the earth crust.
4. Sometimes when the pressure in the magma chambers becomes too much, the magma is pushed, through channels called vents and comes out with great force onto the surface of the earth through weak points or cracks and the coming out of lava etc. is called volcanic eruption.
5. Tsunami is the tidal or strong waves comes in the sea and also causes a great destruction near the sea coast area by water or strong waves.
6. There are two reasons of floods :
 - (i) When rivers overflows due to heavy rainfall.
 - (ii) When rivers overflows due to releasing of excessive amount of water from the dams.
7. A drought is a natural calamity, it occurs when area has no rain or less rain than normal for a long period of time and also people/animals also have no water for drinking and irrigation.
8. The necessary conditions for drought are hot dry winds, very high temperature and evaporation of moisture from the ground can result in conditions of drought.

(C) Fill in the blanks with the words given below :

1. earth quake 2. calamities 3. indian 4. tsunami 5. hills

(D) Say whether the following statements are 'True and False' :

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

Sharpen your vocabulary

(A) Match the following :

1. Flood - heavy rains or over flow rivers
2. Drought - lack of rainfall/water
3. Earthquake - seismograph
4. Volcano - lava
5. Tidal waves - tsunami

Activity

(A) Collect, paste and label the pictures of natural calamities in the given space below :

Do it yourself

(B) Pick the alphabet from the spelling of DROUGHT and find out the names of animals :

Duck Rhinocers Ostrich Unicorn Giraffe Hen Tiger

CHAPTER 13 : SOIL EROSION AND CONSERVATION

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. Soil is the upper layer of the earth's crust.
2. Soil is formed when big rocks breaks up into very tiny pieces due to the heat, wind and water. It takes thousands of years for the rock to turn into soil. The three layers of the soil are top soil, sub soil and bedrock.
3. Soil is very important for us because :
 - (a) Soil is a home to small animals like, ant, rat, mole and earthworm.
 - (b) Plants grow in soil and much of the food we eat comes from plants.
 - (c) Mineral and ores are obtained from rock which lie beneath the soil.
 - (d) Soil helps in the germination of seeds.
4. The loss of soil from the top layer of soil by wind, grativity or human activities are known as soil erosion.
5. Planting of trees in large scale on open land which has not been a forest is known as afforestation.
6. Human being is mainly responsible for soil erosion because :
 - (a) Human being cut down the trees and the soil become loose and easily eroded which result into soil erosion.
 - (b) Ploughing of the hill slopes is yet another human activity.
 - (c) Overgrazing by cattles on the same piece of land year after year cause soil erosion.
7. Soil conservation means to stop or atleast slow down erosion from occuring or protection of soil from erosion is called soil conservation.
8. The two methods of soil conservations are :
 - (i) Terrace Farming
 - (ii) Making Embankments

(C) Fill in the blanks with the words given below :

1. topsoil 2. soil 3. soil erosion 4. deforestation 5. soil conservation

(D) Say whether the following statements are 'True and False' :

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

Sharpen your vocabulary

(A) Match the following :

1. Loss of top soil - soil erosion
2. Soil conservation - protection of soil
3. Upper layer of soil - topsoil

4. Cutting down trees - deforestation
5. Planting more trees - afforestation

Activity

- (A) Do himself.
(A) Do himself.
-

CHAPTER 14 : OUR UNIVERSE

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. The moon shines brightly at night. The moon has no light of its own. It gets light from the sun. It is smaller than the sun through it appears to be of the same size. This is so because the moon is closer to us than the sun.
2. The moon is like a desert with plains, mountains and valleys. The surface of the moon is scarred with millions of impact craters. These craters range in size up to many hundreds of kilometres. The craters are made of chunks of rocks called meteorites that strike the moon. The rocks that were brought back to earth by astronauts tell us that the surface of the moon is covered with dark grey dust.
3. Craters are formed on the moon surface by the chunks of rocks called meteorites that strike the moon.
4. A lunar eclipse occurs when the sun, earth and moon are in a straight line with the earth between the sun and the moon. The earth blocks the light of the sun. A complete darkening at the surface of the moon by the earth is called a total lunar eclipse.
5. A solar eclipse occurs when the sun, moon and earth are in a straight line with the moon between the sun and the earth. People living in the part of the earth where the shadow is found cannot see the sun.

As the size of the moon is smaller than that of the earth, its shadow does not cover the whole part of the earth. Then a part of the sun is visible. Such an eclipse is called a partial solar eclipse. When the sun is completely covered by the shadow of the moon, it is called a total solar eclipse or annular eclipse.

6. When only a part of the moon enters the earth's shadow, it is called partial lunar eclipse.
7. Artificial satellites are man made machines sent into space to orbit a planet. The moon is a natural satellite.
8. Satellites are useful to man in different purposes :
Communication satellites like INSAT are used to distribute signs and signals of telephone and electronic programmes around the world. Weather satellites observe the earth for weather forecasting. Navigation satellites send message from one country to another, from land to an aircraft or to a ship. Military satellites are used for observing the different borders and territories of the countries by the respective country to check infiltration. Space satellites are used to study the outer space, planets and stars.

(C) Fill in the blanks with the words given below :

1. 384,400 2. satellite 3. lunar 4. new moon 5. planets

(D) Say whether the following statements are 'True and False' :

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

Sharpen your vocabulary

(A) Match the following :

1. Aryabhata - first indian artificial satellite
2. Sputnik I - artificial satellite
3. Lunar eclipse when - the moon comes between the sun and earth
4. Solar eclipse is when - the earth comes between the sun and moon
5. The moon - natural satellite

(B) Name the following :

- | | | |
|-------------------------|--------------|-------------------|
| 1. Sputnik-I | 2. Aryabhata | 3. Neil Armstrong |
| 4. Valentina Tareshkova | 5. Moon | |

Activity

(A) Do himself.

(A) Do himself.

FORMATIVE ASSESSMENT-4

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. Soil conservation means to stop or atleast slow down erosion from occuring or protection of soil from erosion is called soil conservation.
2. Pollution is the mixing of some harmful or poisonous substance into the natural resources available on the earth.
3. A lunar eclipse occurs when the sun, earth and moon are in a straight line with the earth between the sun and the moon. The earth blocks the light of the sun. A complete darkening at the surface of the moon by the earth is called a total lunar eclipse.
4. Soil is very important for us because :
 - (a) Soil is a home to small animals like, ant, rat, mole and earthworm.
 - (b) Plants grow in soil and much of the food we eat comes from plants.
 - (c) Mineral and ores are obtained from rock which lie beneath the soil.
 - (d) Soil helps in the germination of seeds.
5. The three R's are Reduce, Reuse and Recycle.

Reduce : Reduce your needs like don't be greedy live simple life in less things.

Reuse : You have can reuse thing, buy things which can be used again and again over a long period of time.

Recycle : We can recycle some waste materials like paper, metals, clothes, rubbers etc.

(C) Fill in the blanks with the words given below :

1. calamities 2. soil erosion 3. soil 4. paper machine 5. lungs

Activity

(A) Pick the alphabet from the spelling of DROUGHT and find out the names of animals :

- Duck Rhinocers Ostrich Unicorn Giraffe Hen Tiger

SUMMATIVE ASSESSMENT-2

(A) Multiple Choice Questions (MCQ)

Tick (✓) the correct answer :

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

(B) Answer the following questions :

1. The process of removing insoluble impurities present in water by way of leaving undistributed for sometime and then impurities lay down and clear water comes out, this process is called sedimentation.
2. Energy is the capacity to do work, without energy there would be no life and no movement.
3. The two methods of soil conservations are :
(i) Terrace Farming (ii) Making Embankments
4. Minerals are found in earth or are naturally occurring substances. All rocks are made up of one or more minerals.
5. Air contains about 79% of Nitrogen, about one-fifth (20%) of the air is oxygen. Other gases such as carbon dioxide, argon, hydrogen, ozone, helium, neon etc. are only 1% of the air. Carbon dioxide is only 0.03% of the air. Besides these gases, air also contains dust, smoke and water vapour.
6. Tsunami is the tidal or strong waves comes in the sea and also causes a great destruction near the sea coast area by water or strong waves.

(C) Fill in the blanks with the words given below :

1. topsoil 2. electrical 3. water 4. tsunami 5. motion

(D) Say whether the following statements are 'True and False' :

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

(E) Match the following :

- | | |
|---------------------------------|---------------------------------|
| 1. Basalt - Igneous Rock | 2. Slate - Metamorphic Rock |
| 3. Sandstone - Sedimentary Rock | 4. Topaz - Non-metallic Mineral |
| 5. Gold - Metallic Mineral | |

(F) Name the following :

1. Sputnik-I 2. Aryabhatta 3. Neil Armstrong
4. Valentina Tarehskova

Activity

- (A) Do himself

