
# Food & Nutrition


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. vitamins 2. fat 3. temperature 4. nutrition

**C. Write one word for the following.**

1. Vitamins and minerals 2. Fats 3. Vitamins
4. balanced diet 5. proteins

**D. Match Column A and Column B.**

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

**E. Answer the following questions.**

1. Water is very essential for the proper growth of our body. Water helps the body to digest food, get rid of wastes and to use the nutrients properly.
2. Fruits, vegetables, milk and meat are four sources of vitamins and minerals.
3. The process of treating food in a way that preserves its value for a long time is called preservation.

   We have different methods to preserve food like canning, dehydration, freezing, salting, sugaring, refrigeration, drying etc.
4. A balanced diet contains the right amount of carbohydrates, proteins, fats, vitamins and minerals. No single food contains all the nutrients in the right amounts. Therefore, we need to eat a variety of healthy foods in order to have a balanced diet.
5. Carbohydrates are the nutrients which give us energy to do work. Sugar and starch are two types of carbohydrates. Some food item rich in carbohydrates are bread, oatmeal, wheat, rice, potato, sweets, chocolates, chapatis etc.

## Fun Activity

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| M | B | V | N | R | O | L | I | S |
| I | E | H | I | Y | C | S | T | A |
| N | G | T | E | I | D | N | R | U |
| E | A | Y | T | Z | F | I | O | N |
| R | H | F | O | L | T | M | Q | Z |
| A | G | A | R | D | K | A | E | P |
| L | U | T | P | R | E | T | A | W |
| V | O | S | V | C | H | I | N | X |
| Q | R | B | I | J | S | V | P | Z |

**Think and Answer**

Introducing new flavors or serving milk in different ways might make it more appealing to your child. Children who do not get milk to drink, they can be provided milk at school level.

# 2 Plants : The Food Producers


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. Chlorophyll 2. lamina 3. starch
4. non-green plant 5. midrib

**C. Write 'T' for true and 'F' for false statements.**

1. T 2. T 3. F 4. T 5. F

**D. Match Column A and Column B.**

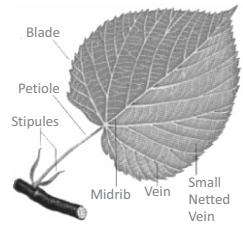
1. d 2. e 3. a 4. c 5. b

**E. Answer the following questions.**

1. See topic 'The process of making food : Photosynthesis' on book page no-13.
2. Leaf is generally flat. The flat surface of the leaf is called lamina or leaf blade. A main vein passes through the middle of the leaf blade.

This vein is called midrib. A network of fine veins starts from the midrib and spreads all over the leaf blade.

The lower and upper surface of leaves have tiny openings or pores called stomata. The stomata are so tiny that we cannot see them. Plants breathe through these stomata.




3. Both plants and animals are interdependent on each other in several ways.
   (i) Plants provide us oxygen and take in carbon dioxide needed for photosynthesis. Animals take in oxygen and give out carbon dioxide during breathing.
   (ii) Plants provide food to animals and human beings. Animals also help plants in spreading of seeds, so that new plants can be grown at different places. Animals also help in the formation of fruits.
4. All living things need food to grow, but all of them do not produce food. Green plants are the only ones that can make their own food. Green plants make their food in their leaves. Leaves are the food factory or kitchen of the plant.
5. Two insectivorous plants are pitcher plant and flytrap.
6. Sunlight is essential for the process of photosynthesis because leaves trap the sunlight with the help of chlorophyll and prepare the food.

## Fun Activity

| G | A | B | H | J | L | K | T | T | S | U |
|---|---|---|---|---|---|---|---|---|---|---|
| C | H | L | O | R | O | P | H | Y | L | L |
| S | T | A | R | C | H | O | S | R | O | V |
| F | C | M | I | P | M | N | W | U | X | R |
| E | D | I | C | G | L | D | A | Q | Y | W |
| S | U | N | L | I | G | H | T | Q | G | P |
| E | I | A | J | X | A | B | E | V | E | W |
| H | Z | F | Y | K | M | N | R | O | N | Y |
| S | T | O | M | A | T | A | X | U | Z | V |

### Think and Answer

1. PHOTOSYNTHESIS
2. CHLOROPHYLL
3. STOMATA
4. LAMINA


# Our Teeth


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

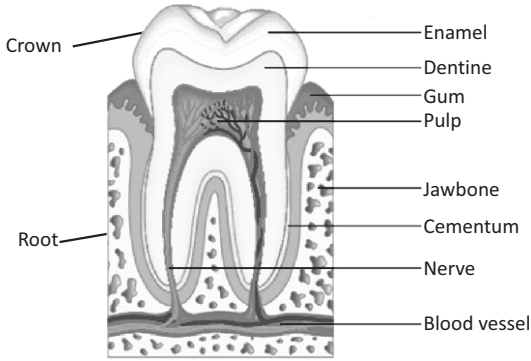
1. permanent 2. Crown 3. tongue cleaner
4. four 5. tearing teeth

**C. Match Column A and Column B.**

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

**D. Answer the following questions.**

1.




Structure of a tooth

2. Following are some ways to protect your teeth from decaying :
   (i) Brush your teeth twice a day–in the morning and before you go to bed.
   (ii) Massage your gums to keep them strong and healthy.
   (iii) Rinse your mouth after each meal. This washes out the bacteria and prevents plaque and gum boils.
   (iv) Clean your tongue daily with a tongue cleaner.
   (v) Do not take too many sweets and chocolates.
   (vi) Visit a dentist every six months. Ask the dentist to show you the correct way to brush and floss your teeth.
   (vii) Eat raw food like apples, carrots and radish. If we take care of our teeth, they will remain healthy and strong for our entire life.

3. Tooth decay begins when bacteria form a thin sticky film on your teeth called plague. They produce a sour substance called on acid, which eats away the enamel. This can lead to a small hole in a tooth, called a cavity. it tooth decay is not treated, it can cause pain, infection, and even tooth loss.
4. See topic 'Types of Teeth' on book page no- 19.
5.

| Milk Teeth | Permanent Teeth |
|---|---|
| By the time we grow two - and - a - half years old, we have twenty teeth. They are called temporary teeth or milk teeth. | At about six to seven years of age, our temporary teeth start falling out one by one. Now to take their place, a new set of teeth start growing. This set has thirty two teeth and these teeth are called the permanent teeth. |

**Think and Answer**

They advice us to take care of our teeth. It we respond to them in right manner, Our teeth will remain healthy and strong for our entire life.


# Digestion


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. tongue 2. mouth 3. smaller 4. small intestine

**C. Write 'T' for true and 'F' for false statements.**

1. F 2. T 3. F 4. T 5. F

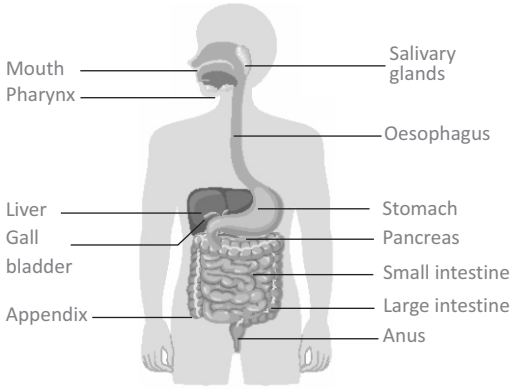
**D. Match Column A and Column B.**

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

**E. Answer the following questions.**

1. The process of breaking down the food into simple form is called digestion. The different organs which are involved in this process together form the digestive system.
2. The digestion of food is completed in small intestine. The main function of the large intestine is to remove water from the undigested food.

3.




Digestive system

4. We should follow good eating habits to ensure that we stay healthy.
   - Always wash your hands before and after meals.
   - Eat clean and freshly prepared food.
   - Do not eat fried food, junk food, sweets, chocolates, ice-creams very often. Avoid drinking soft drinks.
   - Do not eat snacks between meals.
   - Do not overeat. Extra food increases our weight and is harmful for health.
5. The stomach contains digestive juices which is very useful to digest the food. This part mashes the food and mix it with digestive juices. The acid present in stomach kills the germs which may be present in the food. Some parts of the food are digested in the stomach. From the stomach, the food goes into the small intestine.

**Think and Answer**

Small intestine is longer than large intestine because most of the absorption of food and digestion of food occurs in the small intestine while in the large intestine only water and some salts are absorbed here.


# Adaptations in plants

## EXERCISES

**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. terrestrial 2. Conifer 3. Mangrove 4. plains 5. conical

**C. Match Column A and Column B.**

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

**D. Write one word for the following.**

1. mangroves 2. Underwater plants 3. Conifers
4. Sugarcane 5. Banyan

**E. Answer the following questions.**

1.

| Terrestrial Plants | Aquatic Plants |
|---|---|
| The plants that grow on land are called terrestrial plants. | Plants that grow in water are called aquatic plants. |

2. The roots of these plants do not get sufficient air. So the roots come out of the soil and water to breathe.
3. These plants have thin, ribbon-like narrow leaves. There is no stomata on their leaves. They are fixed to the muddy bottom of the water by their roots. They breathe through their body surface.
4. The special features that allow an organism to live in a particular area are known as adaptations.
5. (a) Their leaves are waxy and needle like, so that they loss minimum amount of water and shed show without difficulty. Example : Pine tree, spruce tree. fir tree etc.
   (b) The plants have broad leaves and branches. These trees shed their leaves in autumn and bear new leaves in spring. Banyan, Mango, neem, peepal are some examples of these trees.
   (c) The roots of these plants are very long and go deep into the soil in search of water.

   Example : cactus, date palm, prickly pears etc.
6. • These plants have fibrous roots system.
   • The leaves of these plants perform photosynthesis to make the food.

**Think and Answer**

To live together in harmony sharing all the resources together and be patience.


# Adaptations in plants


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. blubber 2. wings 3. webbed 4. spines 5. aerial

**C. Write 'T' for true and 'F' for false statements.**

1. T 2. F 3. T 4. F

**D. Write one word for the following.**

1. Carnivores 2. hibernation 3. migration
4. amphibians 5. arboreal animlas

**E. Define the following.**

1. **Adaptation :** An adaptation is a change in structure, function or behaviour by which an individual improves its chances of survival in a specific environment.
2. **Aestivation :** Some desert animals cannot tolerate the extreme hot of desert, so they enter a deep sleep like state. This is called aestivation. These animals return to their normal state when the climate becomes suitable. Example - Earthworms, frogs.
3. **Camouflage :** The skin colour of some animals matches their surroundings. It helps them to blend into the surroundings in order to hide from their enemies. This is known as camouflage.

**F. Answer the following questions.**

1. Camels have thick or padded feet to protect from the hot sand. Their skin is thick and not very hairy. They store food as fat in the hump. This stored fat provides the energy to the camel.
2. They have the following adaptations :
   - They have claws and broad hip girdles to support their body while climbing.
   - Their feet and hands become adapted for seizing, grasping or holding objects by wrapping around them. Their fingers and thumb are shaped in such a way that they can hold the branches firmly.
3. Some birds fly to warmer regions during winter months to protect themselves from the extreme cold and to search for food. They return to their homes after winter. This periodic movement is called migration.

4. Some animals imitate the sound of other animals who are their predators. They protect themselves from their enemy by confusing the enemy using mimicry. For example-moth caterpillar defends itself by mimicking a snake.
5. Frog has the following adaptations:
   - They have lungs to breathe on land and gills to breathe in water.
   - Frogs have webbed feet to swim in water and hop on land.

**Think and Answer**

- They have lungs to breathe on land and gills to breathe in water.
- They have legs which help them to move on land. Frogs have webbed feet to swim in water and hop on land.

Now conduct a seminar and discuss on it.


# Reproduction in Animals


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. mammals 2. jelley 3. caterpillars 4. metamorphosis

**C. Write one word for the following.**

1. Frog 2. Yolk 3. Mommals
4. Caterpillar 5. Tadpole

**D. Find out the odd word which does not belong to the group.**

1. Lion 2. Spawns 3. Frog 4. Maggot

**E. Answer the following questions.**

1. All living things eat, grow, get old and then die. But if they do not produce more of their own kind, they will have nobody to represent them in the future. Therefore in order to continue their race, animals produce young ones.
2. See topic 'Amphibians' on book page no- 52.
3. See topic 'Structure of an egg' on book page no- 51.
4. Characteristics of mammals :
   - Mammals are warm-blooded animals who give birth to their younger ones.

- They have mammary glands that help them produce milk to feed their younger ones.
- Some mammals can lay eggs also.

5. See topic 'Birds' on book page no- 51.

**Think and Answer**

The main factor that determine whether an animal will lay eggs or give birth to live young are related to the development and survival of their offspring.


# States of Matter

## EXERCISES

**A. Tick (✓) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. decreases 2. solid 3. Molecules 4. liquid

**C. Write the state of the following substances.**

1. gas, liquid, liquid 2. solid, liquid, gas 3. gas, solid, solid

**D. Circle the odd one out:**

1. Spoon 2. Water 3. Volume 4. Ink

**E. Answer the following questions.**

1. molecules in a liquid are not arranged very close to each other. the force of attraction or binding between the molecules of a liquid is not very strong. So liquid do not have fixed shape and can flow easily.
2. Matter exists in three states :
   - Solid • Liquid • Gas

   **Solid :** Molecules are packed very close to each other.

   **Liquid :** Molecules are not very closely packed.

   **Gas :** Molecules are very loosely packed.
3. Matter has mass and takes up space because it is made up of tiny particles. These tiny particles are called molecules.
4. The solid which dissolves in a liquid is called solute, while the liquid (here water) is called solvent. When a solid dissolves completely in a liquid, the resulting liquid is known as solution.
5. Matter has mass and takes up space because it is made up of tiny particles. These tiny particles are called molecules.

**Think and Answer**

Conversion of a substance from the solid to the gaseous state without its becoming liquid is known as sublimation.

# 9 Force, Work and Energy

## EXERCISES

**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. push, pull 2. sun 3. gravitational force
4. Liver 5. energy

**C. Write 'T' for true and 'F' for false statements.**

1. F 2. T 3. T 4. F 5. T

**D. Match Column A and Column B.**

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

**E. Give one word for each of the following.**

1. Force 2. Sun 3. Gravitational Force 4. Inclined plane

**F. Answer the following questions.**

1. The push or pull applied on an object to make it move is called force. There are different kinds of forces around us:
   - Muscular force • Gravitional force • Frictional force
2. **Solar energy** : The energy which we get from sun is known as solar energy. Solar cooker, solar calculator, solar heater are conducted by sun. We get this energy only in the day time. When the rays of sun fall on all these appliances, they are able to work. Heat energy of the sun changes into mechanical energy to move engines and machines.
3. Machines help us in the following ways:
   - They make our work easier and faster.
   - They change the direction of the applied force.
   - They help us to do our work by applying less force.
4. See topic 'Sources of Energy' on book page no- 66.
5. The sin types of simple machines, and their examples are :
   (a) Lever : can opener
   (b) Wheel and axle : bicycle

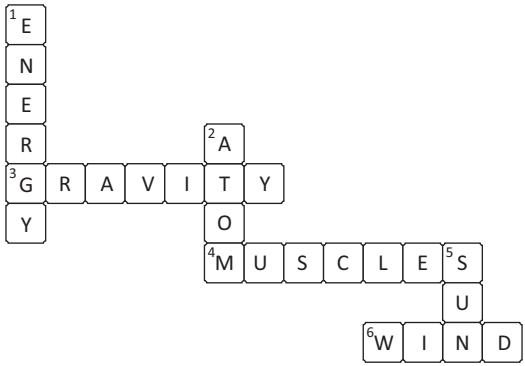
(c) Inclined plane : drums can be rolled up into the truck with the help of inclined plane.

(d) Pulley : draw water from a well. (e) Screw : Screwdriver.

(f) Wedge : are.

6. The energy that is produced when an atom or atoms are split, is know as atomic energy.
7. The energy of the wind turns windmills that in turn move other machines called turbines, which help to produce electrical energy.

## Fun Activity




### Think and Answer

Knives, scissors, sharp or pointed objects and broken glass can cause serious injuries. So, these objects should be kept out of children's reach.

# 10 Clothes and Fibres

## EXERCISES

**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. natural 2. raincoat 3. torn 4. flax 5. cotton

**C. Write one word for the following.**

1. Silkworms 2. Dry-cleaning 3. wool 4. Overalls
5. Naphthalene

**D. Write 'T' for true and 'F' for false statements.**

1. T 2. F 3. F 4. T 5. T 6. F

**E. Match Column A and Column B.**

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

**F. Answer the following questions.**

1. Cotton keeps the body cool by absorbing body sweat and allowing the air circulation. loose and white or light-coloured cotton clothes reflect the hot rays of the sun and keep the body cool.

2.

| Natural Fibres | Synthetic Fibres |
|---|---|
| Fibres obtained from either plants or animals are called natural fibres. Cotton jute hemp are plant fibres while wool, silk, fur are animal fibres. | Synthetic fibres are man-made fibres which do not occur in nature. They are also called artificial fibres. Example-rayon, nylon, polyester, lycra etc. Synthetic fibres can also be woven into a cloth. |

3. Wearing clean and comfortable clothes helps us look good and stay healthy. Clothes protect us from the heat of the sun, dust, cold, rain and insect bites.
4. See topic 'Natural Fibres' from book page no. 75.
5. • When the weather is hot, We wear cotton clothes. In winters, we wear woollen clothes to protect us from cold.
   • In rainy season, we wear raincoats or carry an umbrella when we go in rain.
6. See topic 'care of clothes' on book page no. 77.
7. Synthetic clothes have a tendency to trap heat against the body. Unlike natural fibres like cotton or linen, which allow air to flow freely, synthetic fabrics tend to cling to the skin and prevent heat from escaping. This can cause the body to overheat, leading to discomfort, and even heat exhaustion.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# Insects

## EXERCISES

**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. compound eyes 2. swarms 3. yellow
4. caterpillar 5. eleven

**C. Write 'T' for true and 'F' for false statements.**

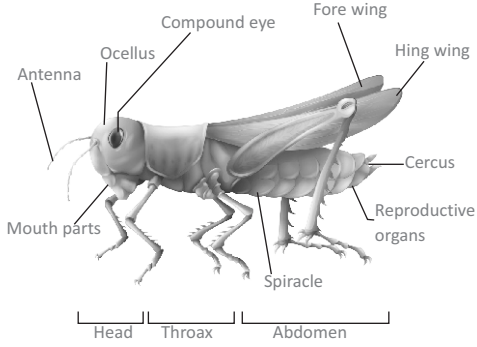
1. T 2. F 3. T 4. T 5. F 6. F

**D. Match Column A and Column B.**

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

**E. Answer the following questions.**

1. Abdomen
2. Some insects are very useful to us. They help us in many ways.
   - Bees help is pollination. Without bees, the world would have no flowering plants.
   - Ladybugs are helpful and beautiful. Gardeners love them because they eat pests.
   - We get silk from silkworms.
   - Dragonflies eat mosquitoes. Mosquitoes carry the malaria virus which is deadly to humans.
3. See topic 'Butterfly' from book page no. 83.
4. Structure of an insect is given below :




5. The head of an insect is where the main parts are located. Eyes, mouth parts with biting parts are located here. A pair of antennae are also

present here which are sensory organs that allow the insect to use its smell, touch, taste and hearing abilities. The head of the insect is the most powerful part of the body. The eyes of an insect are known as compound eyes because these are made up of several smaller eyes.

**Think and Answer**

Many insects such as ants bees, wasps and termites organise themselves into societies. We can learn division of labour, communication, conflict, cooperation and altruism from these insects.


# Air, Water and Weather

## EXERCISES

**A. Tick ( 3 ) the correct option.**

1. (a) 2. (d) 3. (b) 4. Sun

**B. Fill in the blanks with correct words.**

1. unevenly 2. filter 3. humidity
4. wind 5. sewage

**C. Write 'T' for true and 'F' for false statements.**

1. F 2. T 3. T 4. F 5.

**D. Match Column A and Column B.**

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

**E. Answer the following questions.**

1. Air is the most important component for the survival of life on Earth. We breathe in air. The oxygen present in air is required for respiration of living beings. The carbon dioxide present in air is essential for the green plants to manufacture their own food by the process of photosynthesis.
2. Boiled water will be free from microbes but it may have Contaminants like minerals or metals whereas filtered water will be free from heavy metals and minerals too.
3. The air which blows from the sea to the land during the day is known as sea breeze.
4. See topic 'Weather' from book page no- 96.
5. Using water carefully without any wastage is called conservation of water. Here are a few ways in which you can conserve the water :
   - Turn off the tap while brushing teeth.
   - Turn off sink faucet while scrubing dishes and parts.

**Think and Answer**

Air pollution increases the risk of respiratory infections, heart disease, stroke and lung cancer and more severely affects people who are already ill.


# Air, Water and Weather


**A. Tick (3) the correct option.**

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

**B. Fill in the blanks with correct words.**

1. roots 2. bedrock 3. soil 4. burrows
5. weathering 6. sandy 7. rotation

**C. Write 'T' for true and 'F' for false statements.**

1. F 2. T 3. F 4. F 5. F 6. T

**D. Match Column A and Column B.**

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

**E. Answer the following questions.**

1. Soil is formed from the weathering of rocks and minerals. The hard rocks present on the surface of the earth are heated up by the sun and cooled down by rain and wind. Due to this constant heating and cooling they develop cracks. With the passage of time and continuous action of wind, water and temperature these cracks get bigger and bigger. As a result, the rocks break up into smaller pieces.
2. See topic 'Layers of soil' from book page no- 100.
3. Soil erosion is a naturally occuring process which takes place mainly due to action of natural agents such as wind, water, gravity (when soil moves down mountains due to gravity). Soil erosion can also be caused by living organisms such as burrowing animals and humans.
4.

| Sandy soil | Loamy Soil |
|---|---|
| It consists of big sand particles. No plants grow in such soil. | It is a mixture of sand and clay. It is the best soil for growth of plants. |

5. Conservation of soil is very necessary to check the soil erosion. We can conserve the soil by following some steps:
   - We must plant more and more trees. The roots of trees hold the soil firmly together and prevent them from getting eroded. Trees act as a

barrier against the force of wind.

- We should not cut the tress unnecessary. New trees should be planted to replace the ones which are cut down.
- We should stop overgrazing. Because of this topsoil becomes loose and easily blown away or washed away.

## Fun Activity

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| M | D | N | L | T | U | C | B |
| S | U | B | S | O | I | L | E |
| A | Z | E | A | P | G | A | D |
| F | O | Y | N | S | B | Y | R |
| X | C | P | D | O | N | S | O |
| J | Q | H | M | I | K | Y | C |
| X | I | T | K | L | Z | T | K |

**Think and Answer**

It soil would not be there on earth then we will not be able to grow plants and if we don't plant trees then we will not get essential products and we will not be able to survive.


# Our Environment

## EXERCISES

**A. Tick (3) the correct option.**

1. (d) 2. (d) 3. (d)

**B. Fill in the blanks with correct words.**

1. unwanted 2. pollutant 3. biodegradable
4. reuse 5. non-biodegradable

**C. Write 'T' for true and 'F' for false statements.**

1. T 2. F 3. T 4. T

**D. Match Column A and Column B.**

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

**E. Answer the following questions.**

1. Waste is mainly of two types:
   (a) Biodegradable (b) Non-Biodegradable
2. Waste disposal is known as the removal and disposal of unwanted materials known as waste.
3. Forest fires and volcanic eruptions are two causes of air pollution.
4. The addition of harmful and undesirable substances in water, thus making it unfit for human use, is called water pollution.
   Solutions of water pollution
   - Never throw rubbish away anyhow. Always look for the correct waste bin.
   - Use water wisely. Do not keep the tap running when not in use.
5. Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. for example, used paper can be recycled to make paper plates or toilet paper etc.

## Fun Activity

(i) Solution to stubble burning include readily available and affordable super seeder machines that pluck out the crop residue and turn it into manure. purchasing stubble from farmers and storing it at nearby manned centers is also a solution.

(ii) See topic 'Waste disposal' from book page no- 109.

(iii) Manufactures can reduce emissions by replacing fossil fuels with low/no corbon potions, switching to renewable electricity.

(iv) Carry your own jute bag or cloth bag for shopping.

**Think and Answer**

Carry your own jute bag or cloth bag for shopping. It will reduce the use of polythene bags.