



A Book of Environmental Studies Planet

4



Solution Manual



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My Extended Family



EXERCISE

A. Tick (3) the correct option.

1. A family unit which consists of relatives related by blood and by marriage :
(a) extended family ☒ (b) nuclear family ☐
(c) joint family ☐
2. Our parents, siblings and other members who live with us :
(a) extended family ☐ (b) immediate family ☒
(c) nuclear family ☐
3. Relation of a man and woman after marriage :
(a) brother-sister ☐ (b) father-daughter ☐
(c) husband-wife ☒
4. Our father's relatives are our :
(a) paternal relatives ☒ (b) cousins ☐
(c) maternal relatives ☐
5. The family members who belong to the mother's side :
(a) paternal relatives ☐ (b) maternal relatives ☒
(c) cousins ☐

B. Fill in the blanks with correct words.

extended family, paternal relatives,
immediate family, marriage, support, compassion

1. The family members who belong to our father's side are the **paternal relatives**.
2. Our grandparents, uncles, aunts and cousins are part of our **extended family**.
3. Our parents and siblings who live with us form our **immediate family**.
4. **Support** and **compassion** towards each other make happy families.
5. An extended family consists of relatives by blood and by **marriage**.

C. Write True or False.

1. We meet our parents on special days like festivals and birthdays. **False**
2. The family members who belong to mother's side are paternal relatives. **False**

3. The oldest member in Sharma's family is ninety-five years old, Mrs. Sharma. **True**
4. Pinki, Kanchan and Kunal are Mrs. Sharma's great grandchildren. **True**
5. Families not only have fun together, but they also solve problems together. **True**

D. Answer the following questions.

1. An extended family is a family unit which consists of related by blood and by marriage which extends over a number of generations.
2. Our parents and siblings who live with us forms our immediate family.
3. The family members who belong to our mother's side are the maternal relatives like mother's parents, brothers and sisters.
4. Families generally meet on many occasions like festivals, birthday parties, wedding and sometimes just for fun which held in our familiar.
5. Family members help each other to solve their problems such as if someone is sick or had any bad injury. Many family members and relative might come forward to assist the family by giving money, buying us fruits etc.



Food-Our Basic Need



EXERCISE

A. Tick (3) the correct option.

1. Food items rich in vitamins and minerals are _____.
 (a) fresh fruits ☒ (b) dry fruits ☐ (c) butter and oil ☐
2. Bread, wheat and potato are rich in _____.
 (a) vitamins ☐ (b) fats ☐ (c) carbohydrates ☒
3. Calcium and iron are some of the _____.
 (a) proteins ☐ (b) fats ☐ (c) minerals ☒
4. _____ repairs worn-out and injured parts.
 (a) Roughage ☐ (b) Minerals ☐ (c) Proteins ☒
5. It is a method of preserving food _____.
 (a) boiling ☒ (b) roasting ☐ (c) baking ☐

B. Fill in the blanks with correct words.

Carbohydrates, fat, Calcium, Vitamins, minerals, Exercise

1. **Exercise** helps us to have a healthy body.
2. **Vitamins** and **minerals** are required to protect us from diseases.
3. **Calcium** is needed for the development of teeth and bones.
4. Extra food is stored as **fats** in our body.
5. **Carbohydrates** give us energy.

C. Write True or False.

1. Nutrients help us to grow healthy and strong. **True**
2. Water does not help in the digestion of food. **False**
3. The protective foods are called vitamins and minerals. **True**
4. Energy is needed for all the activities that go inside our body. **True**
5. Pickling is the process where we mix fruits and vegetables with salt and oil. **True**

D. Match the following.

- | | | |
|------------------|---|-----------------------|
| 1. Food | → | a. Keeps body warm |
| 2. Proteins | → | b. Potato and cereals |
| 3. Roughage | → | c. Gives us energy |
| 4. Carbohydrates | → | d. Not digestable |
| 5. Fats | → | e. Milk and eggs |

E. Answer the following questions.

1. The food we eat contains substances that make us strong and healthy. These substances are called nutrients. Nutrients are important for us because :
 - (i) They give us energy to do work.
 - (ii) They keeps our body healthy.
 - (iii) They are required for growth.
 - (iv) They build our muscle strong.
2.
 - Carbohydrates gives us quick energy. Its sources are : Potato, rice, wheat, cereals, bread, sweets etc.
 - Proteins help in the growth of the body and repair injured parts. Its sources are : Milk, eggs, cheese, pulses, fish, meat and beans etc.
3. Proteins are also known as body-building foods. We need protein because it helps in the growth of the body and repair wornout injured parts also proteins help in the growing children more than adults.

4. Our body needs vitamins and minerals because these foods protect us from disease and keeps our body fit and healthy as our body can't be a disease free body. We need them in small amount such as fresh fruits, vegetables etc. vitamin like A, B, C, D etc.
5. A diet that has right amounts of all nutrients is called a balanced diet. It has the correct amount of carbohydrates, proteins, fats, vitamins, minerals, roughage and water for a balanced diet.

3 The Journey of Food

EXERCISE

A. Tick (3) the correct option.

1. We get eggs, meat and fish from :
 (a) animals ☒ (b) plants ☐ (c) river ☐
2. We use oil and spices to cook :
 (a) mango shake ☐ (b) food ☒ (c) curd ☐
3. We get fruits, vegetables, nuts and _____ from plants.
 (a) pulses ☒ (b) egg ☐ (c) fish ☐
4. To blow through grain in order to remove its outer covering :
 (a) threshing ☐ (b) pesticides ☐ (c) winnowing ☒
5. Which of these is/are community eating?
 (a) Langar ☒ (b) Mid-day meal ☐ (c) Both ☐

B. Fill in the blanks with correct words.

orchards, cereals, coffee beans, community meal, dry fruits

1. Rice, wheat, oats and corn are called **cereals**.
2. Almonds, cashews and walnuts are **dry-fruits**.
3. Coffee powder is made from **coffee beans**.
4. Fruits are usually grown in **orchards**.
5. Langar is a **community meal** that is served in gurudwaras.

C. Write True or False.

1. Cereals, pulses, spices and oils are obtained from different plants. **True**
2. Oil is extracted from special seeds called oilseeds. **True**

3. Vegetables add flavour to our food. **False**
4. Manure and fertilizers are added to the soil to make the soil rich in nutrients. **True**
5. Ploughing is the process where grains are separated from the plants. **False**

D. Match the following.

- | | | |
|----------------------|---|-----------------------|
| 1. Food from plants | — | a. Tea and coffee |
| 2. Food from animals | — | b. Removing the husk |
| 3. Beverages | — | c. Langar |
| 4. Winnowing | — | d. Cereals and pulses |
| 5. Community meal | — | e. Milk and meat |

E. Answer the following questions.

1. There are different types of food we get from plants are cereals, pulses, fruits, vegetables, spices and the oils we use for cooking are all obtained from different plants.
2. Spices are the flavouring substance which add flavour to our food. That's why they are added to our food. Some common spices are cloves, turmeric, peppercorns, cardamom, chillies, curry leaves, mustard seeds, fenugreek and coriander seeds which we get from different plants.
3. Farmers grow crops through many farming methods which are sowing of seeds, preparing of soil for seeds, add manure and fertilizers to increase the fertility then soil is levelled by leveller, providing better irrigation of water, spraying of pesticides, insecticides to protect from insects and at the end crop is harvested. In this ways a farmer grows a better crops.
4. Winnowing is a method to get grains from its covering by blow through grain in order to remove its outer covering.
5. Eating together with other members of our community on special occasions is called community eating. Langar is a community meal that is served in gurudwaras. At the langar, food is cooked in large quantities and served to people free of cost. Its purpose is to combine three noble principles-charity, community service and social equality.



Plants Produce Food for Us



EXERCISE

A. Tick (3) the correct option.

1. Animals depend on plants _____ for their food.
(a) directly ☐ (b) indirectly ☐ (c) both (a) and (b) ☒
2. The _____ of the plants absorb water from the soil.
(a) stem ☐ (b) roots ☒ (c) branches ☐
3. The food made by leaves of the plants is in the form of simple _____.
(a) sugar ☒ (b) proteins ☐ (c) minerals ☐
4. Sugarcane is the _____ in which food is stored.
(a) stem ☒ (b) root ☐ (c) fruit ☐
5. There are many tiny holes present on the underside of a leaf :
(a) stomata ☒ (b) starch ☐ (c) lamina ☐

B. Fill in the blanks with correct words.

stem, Green plants, food, midrib, living

1. The thick vein in the middle of the leaf is called the **midrib**.
2. All **living** things depend on each other for food.
3. Extra **food** is stored in the leaf, fruit, stem or roots.
4. **Green plants** make food in their bodies.
5. The **stem** carries water and minerals from the roots to the leaves.

C. Write True or False.

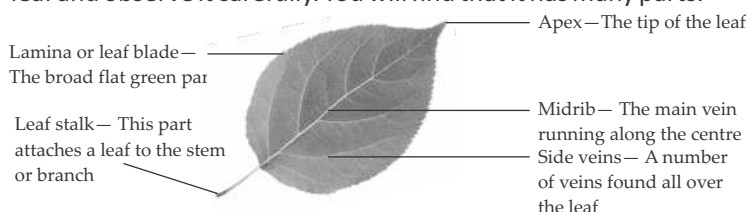
1. Plants can carry out photosynthesis during the day and at night. **False**
2. During photosynthesis, plants take in oxygen and give out carbon dioxide. **False**
3. Plants make sugar during the process of photosynthesis. **True**
4. Stomata helps the plants to breathe. **True**
5. Plants and animals depend on each other for survival. **True**

D. Answer the following questions.

1. When CO_2 and water is added in the presence of chlorophyll and sunlight forms plant food (glucose), oxygen and water vapour is the main process of photosynthesis. The food made by the leaves is in simple form.

[Water + Carbon dioxide + Chlorophyll + Sunlight \longrightarrow Plant food + Oxygen and Water vapour]

2. Leaves prepare food for the plant through different part of leaf. Take a leaf and observe it carefully. You will find that it has many parts.



3. They are called producers because the food we eat like pulses, fruits, vegetable, wheat, rice etc. are produced by plants and human being or herbivores use it for self-consumption.
4. The plants uses its own food to grow and live. They use it to transport water, minerals to other plant parts and for photosynthesis also.
5. Plants and animals depend on each other for survival. Animals depend on plants for their food. Also plants gives out oxygen during the process of photosynthesis. And animals breathe out CO_2 which is used by plants.

5 Blooming Flowers

EXERCISE

A. Tick (3) the correct option.

1. _____ is called the 'queen of flowers'.
(a) Sunflower ☐ (b) Rose ☒ (c) Pansy ☐
2. Marigold and sunflower usually bloom in _____ season.
(a) winter ☐ (b) spring ☐ (c) summer ☒
3. Broccoli and cauliflower are _____ flowers.
(a) edible ☒ (b) decorative ☐ (c) oil-giving ☐

4. Rose, jasmine and champa are used to make _____.
 (a) rangoli ☐ (b) jewellery ☐ (c) perfumes ☒ 3
5. The place where bees are kept in beehives is called an _____.
 (a) aviary ☐ (b) apiary ☒ 3 (c) dairy ☐

B. Fill in the blanks with correct words.

crocus, Pansy, dahlia, scent, rangoli, floriculture

1. Floral pattern on the floor is called **rangoli**.
2. Growing flowers for commercial purposes is called **floriculture**.
3. Some flowers have **scent** that attract bees and birds.
4. Saffron is obtained from **crocus** flower.
5. **Pansy** and **dahlia** are winter flowers.

C. Write True or False.

1. Daisy is a symbol of innocence. **True**
2. Pine, spruce and fern are examples of non-flowering plants. **True**
3. Broccoli and cauliflower are used to make perfumes. **False**
4. Tulip and daffodil bloom in the summer season. **False**
5. Mosquitoes play a very important role in pollinating flowers. **False**

D. Answer the following questions.

1. Uses of flowers are :
 (i) They are use as hair accessories like gagra for women.
 (ii) They are use for worshipping god in temples.
 (iii) They are use for decoration on festivals and occasions.
 (iv) They are use for making perfumes for smell.
 (v) Many flowers used as spices such as saffron and caper.
2. Some strong fragrance flowers are used for making perfumes like mogra, rose, jasmine and few others for better fragrance.
3.
 - Plants that bear flowers are called flowering plant such as rose plant, sunflower plant etc.
 - Plants that do not bear flowers are called non-flowering plants such as pine, spruce, fern etc.
4. When the petals are tightly enclosed in sepals is growing in size, it opens and blooms as a flower which later developed into a fruit that fruit contains seeds inside it. By this process a bud from the stem soon developed into a seed.

5. As flowers have nectaries that attracts pollinators or bees and birds due to which a bee sits on a flower to get its nectar, tiny grains of pollen sticks to its hairy legs and body and then sits to another flower helps in pollination of a flower.

6

Common Trees of India



EXERCISE

A. Tick (3) the correct option.

- Forests prevent :
(a) floods ☐ (b) soil erosion ☐ (c) both of these ☒
- The trees of forests are taken care by the :
(a) gardener ☐ (b) municipality ☐
(c) forest department ☒
- Deforestation includes the conversion of forest land to :
(a) urban use ☐ (b) farms ☐ (c) both of these ☒
- Depletion of the forests for human and commercial uses :
(a) deforestation ☒ (b) afforestation ☐ (c) illegal practice ☐
- Good quality jelly can be made from the fruits of :
(a) neem tree ☐ (b) jamun tree ☒ (c) peepal tree ☐

B. Fill in the blanks with correct words.

Badhal, Khejri, Mahua, peepal tree, tribal, deforestation

- The Bishnois of Rajasthan protect the **khejri** tree.
- Mahua** and **badhal** are wild trees, fruits of which are eaten and used in medicines.
- Deforestation** is highly undesirable and converts a green land into barren.
- Many *manglik* girls are symbolically married to a **peepal tree** before their real marriage to lessen the bad luck.
- In many parts of India, **tribal** people live in forests and worship trees.

C. Write one word for each of the following.

- Planting of the forests in a land which was formerly infertile.
Afforestation
- Person who takes care of trees growing in parks and lawns. **Gardener**

3. Which tree's products are used to make pesticides? **Neem tree**
4. Depletion of the forests for commercial use. **Deforestation**
5. In which disease are jamun seeds used as a medicine? **Diabetes**

D. Answer the following questions.

1. Forests are a huge storehouse of natural resources. It is important for us because :
 - (i) they provide shelter to many birds and will animals.
 - (ii) they give us shade and protection from weather.
 - (iii) they prevent flood and soil erosion.
2. Cutting of trees and clearance of more trees or forests is known as deforestation for human and commercial use. It leads to soil erosion, less O₂ etc.
3. The banyan tree is named after banias, the Hindu traders who used to rest or carry out their business under this tree. In Hindu mythology the banyan tree is also called Kalpavriksh meaning wish fulfilling tree.
4. Peepal tree given so much importance in Indian community because : Many manglik girls are symbolically married to peepal tree before their real marriage to lessen the bad luck. In hindu community, peepal is regarded as a holy tree and worshipped at several occasions.

5.	Features of Neem tree	Features of Jamun tree
(i)	The neem tree is given importance in ayurveda.	(i) Jamun trees are tall and evergreen and its fruit are a rich source of iron.
(ii)	Its leaves, seeds and bark are bitter but have medicinal value. Oil of its seeds is used in cosmetics.	(ii) The seeds of Jamun tree are an effective medicine against diabetes.
(iii)	Its leaves, fruits and bark are used to cure itches and pimples. Neem tree products are also used as pesticides.	(iii) Jelly of good quality can also be prepared from its fruits.



Adaptations in Animals



EXERCISE

A. Tick (3) the correct option.

1. It is called the natural home of an animal :

(a) habitat
☒ (b) adaptation
☐ (c) desert

2. These animals use their tails to balance their body :
 (a) aerial ☐ (b) arboreal ☒ (c) aquatic ☐
3. Animals that fly are known as _____ animals.
 (a) aquatic ☐ (b) aerial ☒ (c) amphibious ☐
4. Hibernation means :
 (a) winter sleep ☒ (b) summer sleep ☐ (c) none of these ☐
5. Plant eaters are known as :
 (a) herbivores ☒ (b) carnivores ☐ (c) omnivores ☐

B. Fill in the blanks with correct words.

Amphibians, hollow, fins, limbs, Camel, omnivores

1. **Amphibians** can live both on land as well as in water.
2. Aquatic animals have **fins** or **limbs** to help them swim.
3. **Camel** lives in deserts.
4. Most birds can fly because they have **hollow** bones.
5. Man is also an **omnivores**.

C. Write True or False.

1. Animals that live both in water and on land are called amphibians. **True**
2. The natural surroundings in which an animal lives is called adaptation. **False**
3. A crab breathes through its gills. **False**
4. Animals that spend most of their time on trees are called aquatic animals. **False**
5. Animals that live on or inside the body of other animals are called parasites. **True**

D. Match the following.

- | | | |
|-----------------------|---|-------------------------|
| 1. Terrestrial animal | — | a. Shark and whale |
| 2. Aquatic animals | — | b. Birds and insects |
| 3. Amphibious animals | — | c. Monkey and chameleon |
| 4. Arboreal animals | — | d. Deer and camel |
| 5. Aerial animals | — | e. Frog and salamander |

E. Answer the following questions.

1. All animals living in a place where there is easy availability of food, shelter and favourable weathered conditions and a place where an animal can live comfortably is called its habitat.

2. When animals go for a long sleep through the winter in a den or burrow to save energy is called Hibernation.

For example : bear, polar bear etc.

3. Two adaptation of animals :

- (i) Most of the animals breathe through their lungs.
- (ii) They usually have legs to move on land such as lion, tiger.

4. It is the special ability of animals to hide by colouring or changing appearance to look like the surrounding is termed as camouflaging e.g., chameleon.

5.	Arboreal Animals	Aquatic Animals
	(i) Arboreal animals have lungs to breathe air. e.g., monkey.	(i) Aquatic animals have gills to breathe air. e.g., fish.
	(ii) They have strong legs and arms which help them to climb.	(ii) They have fins or limbs that help them to swim.
	(iii) They have a strong and long tail.	(iii) They do not have a strong and long tail.

8

Reproduction in Animals

EXERCISE

A. Tick (3) the correct option.

1. An egg has a cover to protect its :
(a) yolk ☐ (b) egg shell ☒ (c) embryo ☐
2. Which of these is present in albumen?
(a) Food ☒ (b) Water ☐ (c) Both (a) and (b) ☐
3. _____ animals are those that reproduce by laying egg.
(a) Oviparous ☒ (b) Viviparous ☐ (c) Both ☐
4. Cockroach, grasshopper and termite have _____ stages in their life cycle.
(a) two ☐ (b) three ☒ (c) four ☐
5. _____ is a mammal.
(a) Butterfly ☐ (b) Cockroach ☐ (c) Dolphin ☒

B. Fill in the blanks with correct words.

mammals, eggs, three, water, yolk

1. Many animal reproduce by laying **eggs**.
2. **Yolk** contain food for the embryo.
3. Frogs lay their eggs in **water**.
4. Cockroach has **three** stages in its life cycle.
5. Animals that feed their young ones their own milk are called **mammals**.

C. Write True or False.

- | | |
|--|--------------|
| 1. A caterpillar becomes a tadpole. | False |
| 2. The life cycle of a butterfly has two stages. | False |
| 3. A cockroach reproduces by laying eggs. | True |
| 4. Animals that lay eggs are called mammals. | False |
| 5. Whales and dolphins are mammals. | False |

D. Answer the following questions.

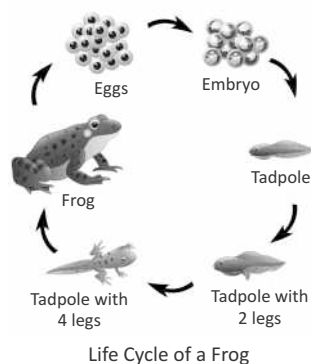
1. It is a biological process by which new individual organisms are produced is called reproduction.

The two ways by which animal reproduce are :

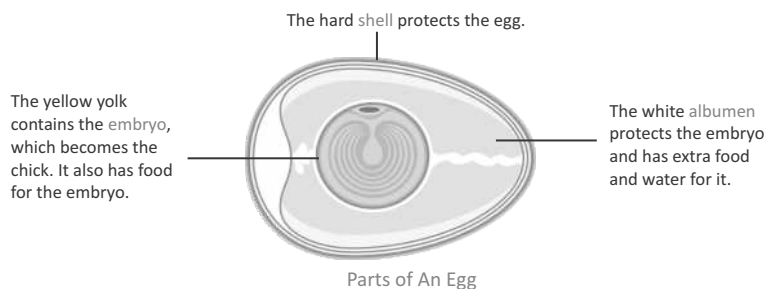
(i) by laying eggs (ii) by giving births.

2. The young one of a butterfly that hatches out of the egg is called caterpillar. Then the caterpillar builds a cocoon around itself to form pupa. Pupa shed its skin many times to change into an adult butterfly. This is the main life cycle of a butterfly.

3.
 - Frog lays their eggs in water or wet places and are covered by a jelly-like slippery material.
 - Soon a tiny tadpole hatches from each egg looks like a fish and breathe through gills.
 - Few week later legs start to grow and the tail starts to shorten and then it develop into an adult frog with no tail or gills.



4.



5. Some animals do not lay eggs and give birth to young babies that feed on their mother's milk. These type of animals are called mammals.
- (i) Mammals take care of their babies for a long period of time.
 - (ii) Their bodies are covered with hair.
 - (iii) Mothers feed their babies on their own milk.

9

Teeth and the Digestive System

EXERCISE

A. Tick (3) the correct option.

- Canines are also called _____ teeth.

(a) grinding	<input type="checkbox"/>	(b) tearing	<input checked="" type="checkbox"/>	(c) biting	<input type="checkbox"/>
--------------	--------------------------	-------------	-------------------------------------	------------	--------------------------
- It is the hardest part of a tooth.

(a) enamel	<input checked="" type="checkbox"/>	(b) dentine	<input type="checkbox"/>	(c) crown	<input type="checkbox"/>
------------	-------------------------------------	-------------	--------------------------	-----------	--------------------------
- This part of tooth has nerves and blood vessels.

(a) Dentine	<input type="checkbox"/>	(b) Pulp	<input checked="" type="checkbox"/>	(c) Enamel	<input type="checkbox"/>
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- It produces juices that play an important role in the digestion food.

(a) Liver	<input checked="" type="checkbox"/>	(b) Food pipe	<input type="checkbox"/>	(c) Small intestine	<input type="checkbox"/>
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- Food pipe is also known as :

(a) mouth	<input type="checkbox"/>	(b) oesophagus	<input checked="" type="checkbox"/>	(c) stomach	<input type="checkbox"/>
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B. Fill in the blanks with correct words.

32, enamel, balanced, food pipe, plaque

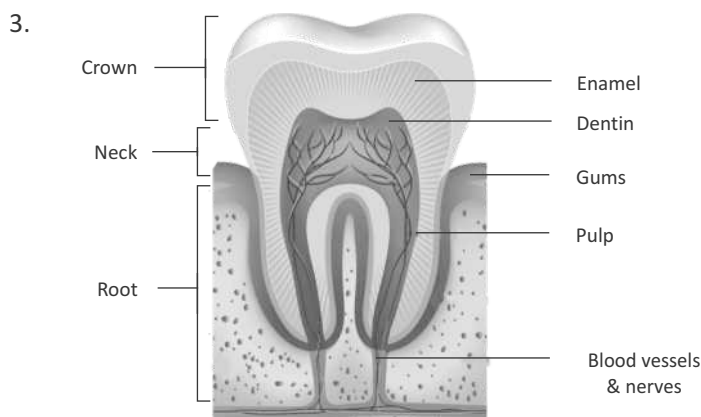
- The visible white part of the tooth is called the **enamel**.
- An adult human has **32** permanent teeth.
- Sticky yellow layer called **plaque** forms on tooth.
- We should always eat a **balanced** diet.
- All the food that we eat goes through our **food pipe**.

C. Write True or False.

1. Temporary teeth fall easily. **True**
2. There are six types of permanent teeth. **False**
3. Dentine is the hardest substance in the human body. **False**
4. The pulp forms the central portion of a tooth. **True**
5. The small intestine is the smallest portion of the digestive system. **False**

D. Answer the following questions.

1. Molars teeth help us to chew and grind the food completely. As they are bigger, broader and are 12 in no.
2. There are two sets of teeth upper and lower having 12 teeth in each set which 32 permanent teeths.



Structure of tooth

4.

Temporary teeth	Permanent teeth
(i) Milk teeth are called temporary teeth.	(i) New teeth after falling of milk teeth are called permanent teeth.
(ii) They will fall at the age of 7 years.	(ii) They don't fall remain for the whole life.
(iii) They are found in childrens which are 20.	(iii) They are found in adult which are 32.

5. The breaking down of food from complex substance into simple substances by our digestive systems.

Here are given the process of digestion system with the help of a diagram.

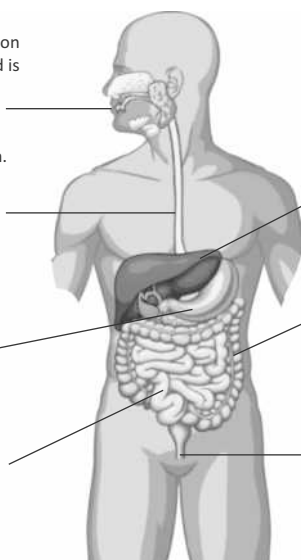
Process of Digestion

Mouth : The process of digestion starts in the mouth. Here, food is broken down by biting and chewing. This chewed food mixes with a liquid called saliva, which helps in digestion.

Food Pipe (Oesophagus) : Food passes from the mouth through this thin long tube called the food pipe and reaches the stomach.

Stomach : It is a sac-like organ where food is broken down further.

Small Intestine : Food from the stomach passes into the small intestine. Here, all the useful nutrients are absorbed by the blood and taken to all parts of the body.



Liver : It produces juices that play an important role in the digestion of food.

Large Intestine : It holds the food that cannot be digested, absorbs water from it, and forms wastes called faeces.

Anus : Faeces are removed from the body through the anus.

10

Water

EXERCISE

A. Tick (3) the correct option.

- Water covers _____ of the earth's surface.
☐ (a) 51% ☐ (b) 61% ☒ (c) 71% **3**
- The sources of water are :
☐ (a) rain water ☐ (b) surface water ☒ (c) both of these **3**
- A _____ is a wall built across a river to block the flow of water.
☒ (a) dam ☐ (b) reservoir ☐ (c) canal **3**
- The process by which water changes into water vapour.
☒ (a) Evaporation ☐ (b) Condensation ☐ (c) None of these **3**
- A _____ is a channel taken out from a river or a reservoir.
☒ (a) canal ☐ (b) dam ☐ (c) reservoir **3**

B. Fill in the blanks with correct words.

underground water, reservoir, pipes, glaciers, springs, sea

- Rivers originate from **glaciers** or **springs** in the mountains.
- Wells, handpumps and tubewells are used to take out **underground water**.

3. A **sea** is also a large water body, but it is smaller than an ocean.
4. A **reservoir** is an artificial lake constructed behind a dam.
5. Water from rivers, lakes or reservoirs is brought through **pipes** to the water treatment plant.

C. Write True or False.

1. Most of the freshwater on Earth comes from rain. **True**
2. Wells, handpumps and tubewells are used to take out sea water. **False**
3. Rivers also originate from the highlands which get plenty of rainfall. **True**
4. The *Godavari, Krishna, Kaveri* and *Mahanadi* are rain-fed rivers. **True**
5. The dykes prevent the water from flowing back to the sea. **True**
6. The blocked river water is stored in the pond. **False**

D. Answer the following questions.

1. Water is considered as precious because water is essential for life. We cannot live without it. We need water to drink, cook food, wash clothes and do many other things. Farmer need water to grow crops.
2. There are many underground sources of water such as wells, hand-pumps and tube wells. It is the cleanest and safest water to drink. In wells motor is fitted who pulls up the ground water which is stored into grounds after rainfall.
3. Rivers originate from glaciers or springs in the mountains. They also originate from the highlands which get plenty of rainfall, like Ganga, Yamuna, Brahmaputra etc.
4. **Evaporation** : The process by which water changes into water vapour is called evaporation. This process takes place due to heating.

Condensation : The process by which water vapour changes back to water, due to cooling is called condensation.

5. There are various methods of storing water, such as buildings canals, reservoirs and dams.
 - Canal store water for farming mainly.
 - Dam store water to generate electricity by running turbines with flowing water.
 - Reservoir is like a artificial lakes used for doing various activities like washing, drinking etc.

11

Senses of Touch and Smell

EXERCISE

A. Tick (3) the correct option.

- What sensory organ is of touch?
(a) Eye ☐ (b) Mouth ☐ (c) Skin ☒
- What we can feel with the sense of touch?
(a) Heat ☐ (b) Pain ☐ (c) Both of these ☒
- When a stranger touches us, we feel :
(a) uncomfortable ☒ (b) safe ☐ (c) happy ☐
- Which of the following receptors are responsible for detection of smell?
(a) Olfactory ☒ (b) Gustatory ☐ (c) None of these ☐
- Braille is based on _____.
(a) dots ☒ (b) lines ☐ (c) square ☐

B. Fill in the blanks with correct words.

epithelium, electrical appliance, brain, Braille, cry, laugh

- The nerves carry messages from the sense organs to the **brain**.
- Pain makes us **cry** and a tickling feeling makes us **laugh**.
- We should never touch **electrical appliance** with wet hands.
- The olfactory **epithelium**, a membrane, is where chemical particles enter the nostril and dissolve in mucus.
- Visually impaired people use a special system to read and write known as **braille**.

C. Write True or False.

- The brain processes the signals and sends a message back to the sense organs. **True**
- Our skin helps us to feel and touch. **True**
- We can know whether an object is hard or soft, by smelling it. **False**
- We should not touch pointed objects like needles, spines or thorns. **True**
- The sense of smell may vary from person to person. **True**

D. Answer the following questions.

1. There are five different sense organs. They are eyes, ear, nose, tongue, skin.
 - eye → to see world.
 - Nose → to smell things.
 - tongue → to taste food.
 - ear → to hear voice.
 - skin → to touch and feel things.
2. Nose helps us to smell food our nostril or passage of nose smell the food and perfumes through olfactory system of nose which was controlled by our brain.
3. The touch by our parents like hug us, holding hand or kiss is good touch whereas any hug, kiss, holding hand doing by any stranger is a bad touch. Especially girls should be aware or alert of these touches.
4. Braille is a coding system where six dots are arranged in a particular sequence each sequence represent a letter.

This is used by visually impaired people or needed to be use because they can't see the objects. So they read by touch and feel of this Braille system.
5. People who don't see objects, *i.e.*, who are blind and who are deaf who don't listen are some differently-abled people.

We can help them by providing some advance gadgets to make their life easy such as hearing machines, Braille books etc. In this way help them.

12 Work Around Us



EXERCISE

A. Tick (3) the correct option.

1. Internship is done by :
(a) chauffeur ☐ (b) tailor ☐ (c) physician ☒
2. A _____ is public prosecutor.
(a) lawyer ☒ (b) mechanic ☐ (c) carpenter ☐
3. A _____ repair cars with tools.
(a) typist ☐ (b) waiter ☐ (c) mechanic ☒

4. These jobs do not need any training by expert :
 (a) unskilled work ☒ (b) skilled work ☐ (c) none of these ☐
5. Professionals who perform manual work are _____ collar workers.
 (a) pink ☐ (b) blue ☒ (c) white ☐

B. Fill in the blanks with correct words.

Woman, institutes, professional jobs, work, occupation

- A work which helps us earn money is called an **occupation**.
- Mechanics are usually trained in **institutes** which offer courses for short duration.
- The professions that require specialised training from institutes are **professional jobs**.
- With uniforms, it is easier to identify the **work** of a person.
- Many **woman** have also joined the armed forces and the police.

C. Give one word for each of the following.

- | | |
|---|------------------|
| 1. One who repairs vehicles | Mechanic |
| 2. One who prevent crime | Policeman |
| 3. On who stitches clothes | Tailor |
| 4. One who builds or repair wooden structures | Carpenter |
| 5. A public prosecutor | Lawyer |

D. Answer the following questions.

- Different people do different type of work and get money after working is called their occupation. *e.g.*, typist, driver, mechanic etc.
- The five jobs that do not require any special skill or training are :
 - Security guard
 - Salesman
 - Production worker
 - Construction labourer
 - Dog walker
- Responsibilities of waiter are :
 - He has to greeting the customer.
 - he has to asking and taking the order.
 - Waiter has to serve it to them.
 - He has to pay attention to their requirements.
 - He has to re-fill drink, take away soiled dishes and offer napkins.

4. Three jobs require training in a professional college or institute are :
 (i) Doctor (ii) Engineer (iii) Pilot
5. There are different collar jobs such as white collar job, pink collar jobs and blue collar job.
 (i) **White Collar Jobs** : These include people who perform desk jobs usually office environment like managerial.
 (ii) **Pink Collar Jobs** : These include those who work in service sector and have a large interaction with customers like service executives, teachers, secretaries etc.
 (iii) **Blue Collar Jobs** : Professionals who perform manual work are blue collar workers. Such work may be performed in an industrial, mining or similar demanding environment work.

13

Mapping Skills

EXERCISE

A. Tick (3) the correct option.

1. A books that contains maps is called :
 (a) dictionary ☐ (b) atlas ☒ (c) textbook ☐
2. A person who makes maps :
 (a) cartographer ☒ (b) mechanic ☐ (c) carpenter ☐
3. _____ is a rough drawing that does not have many details.
 (a) Sketch ☒ (b) Plan ☐ (c) Symbol ☐
4. It helps to find out the size and distance between two places.
 (a) Symbol ☐ (b) Landmarks ☐ (c) Scale ☒
5. If 2 cm represents 600 km, 6 cm is equal to :
 (a) 1200 km ☐ (b) 1600 km ☐ (c) 1800 km ☒

B. Fill in the blanks with correct words.

legend, symbols, colours, cartography, landmark, sketch

1. The art of making maps is called **cartography**.
2. A **landmark** is a place, building or structure that is well-known and easily visible.
3. A **sketch** is a rough drawing without any measurement.
4. Different **symbols** and **colours** are used to show various features like roads, railway lines, etc.

5. A **legend** tells us what the colours and the symbols used in the map represent.

C. Write True or False.

1. East is to the left and West is to the right of the map. **False**
2. It becomes easier for a person to find a new place when there are some landmarks on the way. **True**
3. A sketch is a proper drawing with correct measurement. **False**
4. People who make maps are called cartographers and the art of making maps is called cartography. **True**
5. A legend tells us what the colours and the symbols used in the map represent. **True**

D. Answer the following questions.

1.
 - A drawing of a large area made on paper is called a map which helps us to locate cities, states and countries.
 - Different signs and symbols are used to show various features like roads, railway lines, rivers, bridges etc.
2. A map shows four cardinal directions namely, north, south, east and west. To mark the four directions on a map. The top of the map shows the north and the bottom of the map shows the south, east is to right and west is to the left of the map.
3. To find the direction with the help of rising sun. Stand in an open ground early in the morning and stretch the hand and face to the sun. Our face towards sun shows east and back point to the west, left hand points to the north and right hand to the south direction.
4. A landmark is a place, building or structure that is well-known and easily-visible. A hospital, church, park or museum are some landmarks near our house.
5. We can measure the distance between two places through a scale on a map. The scale on a map helps us to find out the size and distance between two places. With a special ratio *i.e.*, 2 cm is equal to 200 cm.

14

Safety and First Aid



EXERCISE

A. Tick (3) the correct option.

1. We should always walk on the _____.
- (a) road ☐ (b) footpath ☒ (c) anywhere ☐

2. We should follow safety rules :
 (a) only in the bathroom ☐ (b) only in the kitchen ☒ 3
 (c) everywhere ☐
3. Which of these can be used in case of a cut?
 (a) Salt and pepper ☐ (b) Butter ☐
 (c) Antiseptic lotion ☒ 3
4. We should not take a _____ without asking an adult.
 (a) medicine ☒ 3 (b) chocolate ☐ (c) biscuit ☐
5. In case of burn, wash the burnt area with _____ :
 (a) warm running water ☐ (b) hot running water ☐
 (c) cold running water ☒ 3

B. Fill in the blanks with correct words.

wet, cotton, electrical, insect bite, first aid

1. We should wear clothes made of **cotton** in the kitchen.
2. We can slip on a **wet** floor.
3. We should not handle **electrical** gadgets with wet hands.
4. The aid given to an injured person before a doctor arrives is known as **firstaid**.
5. Apply ice or a cool, wet cloth to the area where a person has an **insect bite**.

C. Match the following.

- | | | |
|----------------|---|--|
| 1. Burn | — | a. always hold it by its handle |
| 2. Faint | — | b. give something warm to drink |
| 3. Insect bite | — | c. remove sting |
| 4. Cut | — | d. wash with clean water and apply antiseptic lotion |
| 5. Knife | — | e. wash under running water or apply ice |

D. Answer the following questions.

1. Precautions to be taken in the kitchen :
 (i) Never play with electrical sockets.
 (ii) Wear cotton clothes near to the fire stove or gas stove.
 (iii) Never try to play with knife and hold it with handle.
2. Precautions should be taken in the bathroom :
 (i) Do not touch toilet and cleaning materials of bathroom and keeps the floor dry when not in use.

3. First aid is a immediate help given to an injured person. In case of any accident which is important to offer before an adult or the doctor. First aid box contains antiseptic lotions like dettol, antiseptic cream, bandages, plastic gloves, sticky tape, scissors etc.
4. Safety rules walking on the road are :
 - (i) Cross the road only at the zebra crossing.
 - (ii) Always walk on the footpath.
 - (iii) Follow traffic rules for your own safety and for others also.
5. (a) A person who has fainted wash with cold water and give something warm to drink.
 (b) A person with minor cut put a bandage.
 (c) A person bitten by an insect remove the sting with the help of ID card.
 (d) A person with a burnt finger wash with cold running water and put an icepack until the pain is gone.

15 Clothes

EXERCISE

A. Tick (3) the correct option.

1. Which of these keep us cool?
 (a) Cotton ☒ (b) Wool ☐ (c) Jute ☐
2. Which of these fibres is obtained from an insect?
 (a) Lycra ☐ (b) Silk ☒ (c) Hemp ☐
3. Synthetic cloth is not always suitable for making clothes because it :
 (a) is coarse ☐ (b) is smooth ☐
 (c) catches fire easily ☒
4. Which of the following will destroy silk?
 (a) Clean water ☐ (b) Moths ☒ (c) Neem leaves ☐
5. Which among the following is not used to make fibre?
 (a) Jute ☐ (b) Cotton ☐ (c) Paper ☒

B. Fill in the blanks with correct words.

Moth, neem, synthetic, pores, clothes, Jute

1. Good **clothes** make us look smart.

2. **Jute** is a natural fibre which we get from plants.
3. Cotton clothes are comfortable because they have **pores** that allow heat from body to escape.
4. Nylon, spandex and polyester are examples of **synthetic** fibres.
5. **Moth** balls and **neem** leaves are used to protect clothes from moths and insects.

C. Match the following.

- | | | |
|------------|-------|------------------|
| 1. Wool | _____ | a. Natural fibre |
| 2. Silk | _____ | b. Plantfibre |
| 3. Spandex | _____ | c. Silkworm |
| 4. Cotton | _____ | d. Sheep |
| 5. Jute | _____ | e. Synthetic |
-

D. Answer the following questions.

1. We wear clothes because they are one of our basic needs. Cotton clothes in summer to stay cool, full sleeves to protect us from mosquitos, woollen clothes protect us from cold and keep our body warm and other design clothes for fashion.
2. Fibres come either from plants and animals are called natural fibres. Like jute and cotton are plant fibres while silk and wool are animal fibres.
3. Fibres made from chemicals and crude oil by humans are called synthetic fibres. For *e.g.*, nylon, rayon, lycra, polyester etc. These are useful for different reasons.
4. We should wear dark-coloured clothes in winter because dark colour absorbs more sunlight and helps us to keep our body warm in winters.
5. We take care of our clothes in following ways :
 - (i) We should wash our clothes with soap or detergent. This removes germs, dirt, sweat and stains.
 - (ii) We should dry wet clothes in sunlight so that all germs are killed.
 - (iii) We should store clothes made of silk and wool carefully to prevent damage by insects like silver fish and moths.
 - (iv) Clothes made of silk and wool should be dry cleaned.
 - (v) We should dry clean expensive wollen clothes.



16

Travel and Currency



EXERCISE

A. Tick (3) the correct option.

- The flat piece of land where many rivers flow :
(a) plain ☒ (b) hills ☐ (c) desert ☐
- A row or a chain of mountain is called a _____.
(a) peak ☐ (b) range ☒ (c) plain ☐
- The Great Indian Desert is located in the state of _____.
(a) Rajasthan ☒ (b) Uttar Pradesh ☐ (c) Assam ☐
- An _____ is a piece of land surrounded by water.
(a) plateau ☐ (b) desert ☐ (c) island ☒
- The study of coins is called _____.
(a) numismatics ☒ (b) banking ☐ (c) economy ☐

B. Fill in the blanks with correct words.

Island, peak, coins, plain, landscape

- The pointed top of a mountain is called a **peak**.
- As we travel, the **landscape** keeps changing from place to place.
- Many rivers flow through the **plain**.
- An **island** is a piece of land surrounded by water.
- Money made of metal is called **coins**.

C. Write True or False.

- Plains, mountains, plateaus and islands are important landforms. **True**
- A wide variety of food crops are grown in plains. **True**
- Desert areas receive very little or no rainfall through out the year. **True**
- The plateau region is very rich in mineral resources. **True**
- The money that we pay to buy tickets is called stamp. **False**

D. Answer the following questions.

- There are different land forms on the earth which are plains, hills and mountains, plateaus, deserts, sea and islands. Plains, mountains, plateaus and islands are important landforms.

2. Three features of the mountain regions are :
 - (i) Mountains are the highest portions of land.
 - (ii) They have cooler climate than that of plains.
 - (iii) Mountains have steep slopes and some of the very high mountains are covered with snow.
3. The flat piece of land where many rivers flow though it is termed as plains. River deposit silt make soil rich in fertile. Northern plain of India are formed by the silt deposits of the river Ganga, Brahmaputra, Yamuna and Satluj with their tributaries. A wide variety of crops are grown here.
4. Three features of the desert regions are :
 - (i) These areas receive very little or no rainfall throughout the year which make the climate hot and dry.
 - (ii) The desert region is very dry and sandy. Dust storms are common here.
 - (iii) Summer months are hot and winter months are cold similarly days are hot and nights are cold.
5. Watermark and a security thread given on every bank note because they are made to discourage people from making fake notes.

17 Bricks and Bridges

EXERCISE

A. Tick (3) the correct option.

1. Where are bricks made?

(a) mountain	<input type="checkbox"/> (b) river	<input type="checkbox"/> (c) kiln	<input checked="" type="checkbox"/> 3
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2. Firing makes the bricks _____.

(a) colourful	<input type="checkbox"/> (b) weak	<input type="checkbox"/> (c) hard	<input checked="" type="checkbox"/> 3
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3. Howrah bridge is built on the _____ river.

(a) Ganga	<input type="checkbox"/> (b) Yamuna	<input type="checkbox"/> (c) Hoogli	<input checked="" type="checkbox"/> 3
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4. The Akashi Kaikyo bridge is _____ bridge.

(a) a cantilever	<input type="checkbox"/> (b) suspension	<input checked="" type="checkbox"/> (c) arch	<input type="checkbox"/>
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5. During floods, the army people build _____ bridges.

(a) pantoon	<input checked="" type="checkbox"/> (b) cantilever	<input type="checkbox"/> (c) beam	<input type="checkbox"/>
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B. Fill in the blanks with correct words.

structures, Bricks, Arch, horizontal, supported, Cantilever

1. **Bricks** are the most common material used in building houses.
2. Bridges are the **structures** that are generally used to cross a river.
3. **Cantilever** bridges use steel or box girders to distribute the weight of the bridge.
4. Beam bridge is constructed by laying **horizontal** beams of steel or concrete **supported** by pillars.
5. **Arch** bridges are stronger than beam bridges.

C. Write True or False.

1. Bricks are round in shape and are made of clay. **False**
2. Bricks making leads to heavy pollution and severely affects the health of the kiln workers. **True**
3. Beam bridge is the simplest kind of bridge in terms of its structure. **True**
4. The Howrah Bridge, built over the Yamuna river. **False**
5. The Akashi Kaikyo Bridge in Japan is the world's longest suspension bridge. **True**

D. Answer the following questions.

1. Bricks are made of clay which is kneaded with hand and legs with water to put dough into brick mould and then piled in lines in the field to dry in the sun. Then put in brick kilns and baked and it makes the bricks hard and durable by firing in a furnace. In this process a brick is made.
2. To build a house many natural and synthetic materials are used like :
(i) clay, (ii) stone, (iii) timber, (iv) bricks, (v) concrete, (vi) metals and (vii) plastics are used.
3. The different types of bridges are suspension bridge, cantilever bridge, arch bridge, beam bridge and pantoon bridges. *e.g.*, Vidyasagar setu over river Hoogly is India's longest suspension bridge.
Cantilever → Jadukata bridge
4. If there were no bridge it creates a problem to travel distant places, to pass the railway track which is a danger, we are not able to cross a river for many industrial works. As bridges are the most important structure for human to cross many dangerous routes and makes our life easier.

5. Suspension bridges are suspended with the help of cables and ropes and are attached to towers whereas cantilever bridge like Howrah bridge of India on Hoogly river made with steel or box girders to distribute the weight of the bridge.

18

Pollution in Our Environment



A. Tick (3) the correct option.

- It is a biodegradable waste :
 (a) plastic ☐ (b) glass ☐ (c) kitchen waste ☒
- It is a non-biodegradable waste :
 (a) fruits ☐ (b) plastic ☒ (c) newspaper ☐
- It causes air pollution :
 (a) carbon dioxide ☒ (b) chemical ☐ (c) plastic ☐
- It causes water pollution :
 (a) fertilisers ☒ (b) carbon dioxide ☐ (c) metal ☐
- We get this from trees :
 (a) paper ☐ (b) oxygen ☐ (c) both ☒

B. Fill in the blanks with correct words.

soil pollution, non-biodegradable, air, water, soil, plants, animals, Drains

- We have polluted **air**, **water** and **soil**.
- The living things in nature are **plants** and **animals**.
- Harmful wastes mixed with soil cause **soil pollution**.
- Drains** release this dirty water into the rivers and pollute it.
- Plastic, metal and glass are **non-biodegradable** wastes.

C. Write True or False.

- Human beings depend on man-made resources for their daily needs. **True**
- Bursting crackers during Diwali pollutes the air. **True**
- Biodegradable wastes do not decay. **False**
- Waste decays within 45 days to 90 days and forms manure. **True**
- Non-biodegradable waste can be recycled. **False**

D. Answer the following questions.

1. Air get polluted by the poisonous gases like carbondioxide given out by vehicles and factories mix with the clean air and pollute it in towns and big cities.
2. Water get polluted by the addition of harmful and undesirable substances in water. Thus making it unfit for human use also polluted by dirty water of sewers, houses, shops and factories.
3. Soil get polluted or caused by the addition of undesirable and harmful substances to soil like plastic, unwanted chemicals sprayed on farms, garbage thrown from our homes, factories and agricultural fields.
4. To keep our environment clean we use following methods :
 - (i) Use bicycle or walking on the road for short distance instead of vehicles.
 - (ii) Do-not throw non-biodegradable wastes in seas, oceans, soil.
 - (iii) We should plant more trees to keep the environment clean.
5. Three R's are Reduce, Reuse, Recycle.
 - (i) **Reduce** : It means useless if not required like tissue paper, clothes.
 - (ii) **Reuse** : It means find new ways to use things before you throw them. *e.g.*, old books can be given to someone or in library and use of plastic bottles for decoration.
 - (iii) **Recycle** : It means that waste can be recycled to be used again, like use of newspapers to cover old books.