



**United  
Books**

# Nature

A Text Book of  
**Environment Studies**



**Teacher's Help  
Book (1-5)**

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1

- A. 1. A family is a group of people with whom we share joy and sorrow.  
2. Grandparents tell us stories.
- B. 1. (b); 2. (a); 3. (b); 4. (c)
- C. 1. False; 2. True; 3. True; 4. False
- D. 1. Parents; 2. grandparents; 3. Mother; 4. Grandparents
- E. 1. Yes; 2. Mother; 3. Father; 4. Parents
- F. 1. Parents and their children make a small family.  
2. A family that consists of parents, grand parents, uncle-aunt, cousins, is called big family.  
3. An ideal family is one where all the needs and wants of all the members of family fulfilled.  
4. Mother cooks food for us and she manages home.  
5. Father earns money for family.

Hot Question

A small family is a happy family but we have not company for doing any work. We feel alone in small family. In a big family, festivals and functions are celebrated with full enjoyment.

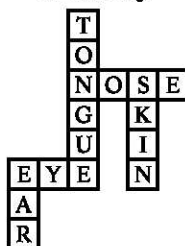
2

- A. 1. Neck is used to move our head right, left, up and down.  
2. Legs are used for walking, running, playing, cycling, etc.
- B. 1. (b); 2. (a); 3. (c); 4. (b)
- C. 1. True; 2. False; 3. True; 4. False
- D. 1. two; 2. legs; 3. tongue; 4. skin
- E. 1. Brain; 2. Hands; 3. Nose; 4. Ears
- F. 1. Hands are used to lift objects, to write.  
2. Legs are used for walking, playing.  
3. Sense organs helps us to know the world around us. Eyes, ears, nose, tongue and skin are five sense organs.  
4. Skin helps us to feel pain, heat and cold.

Hot Question

Brain helps us to think, learn through nerves. In this way, brain controls activities of all the body parts.

Activity





- A. 1. (a); 2. (c)  
B. 1. True; 2. False; 3. True; 4. True  
C. 1. tall, short; 2. short, tall; 3. old man  
D. 1. Yes, I am taller now.  
2. A boy would be a man after growing.  
3. A girl would be a woman after growing.  
4. A plant becomes tree when it grows.

**Hot Question**

Cells in our body grow and split up continuously so we grow.



- A. 1. We feel air when it blows.  
2. Air is used for breathing and burning.  
B. 1. (c); 2. (a); 3. (c); 4. (c)  
C. 1. False; 2. False; 3. True; 4. True  
D. 1. storm; 2. Oxygen; 3. food; 4. green plants  
E. 1. No; 2. Yes; 3. Yes; 4. Yes  
F. 1. Air is all around us. We cannot see air but we can feel it.  
2. Storm is very destructive for us because it uproots trees, holes, houses, etc.  
3. Take two candles and light them. Cover one lighted candle with glass jar. After sometime, you would see that covered candle will stop burning but uncovered candle is burning continuously. Candle covered with jar stops burning because it does not get air. So, it shows that air is needed for burning.  
4. Mixing of harmful particles in air, is called air pollution.

**Hot Question**

Temperature of coastal areas remain moderate due to sea breeze and land breeze.

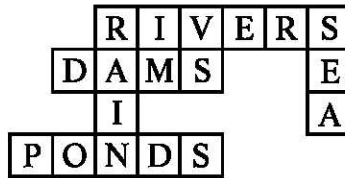


- A. 1. Rain is the main source of water.  
2. Water is necessary for plants for making food so it is very important for farmers.  
B. 1. (c); 2. (a); 3. (c); 4. (a)  
C. 1. False; 2. True; 3. False; 4. True  
D. 1. food; 2. Rain; 3. agricultural; 4. unfit  
E. 1. Yes; 2. Yes; 3. No; 4. Yes  
F. 1. We need water for drinking, cooking, bathing, washing, clothes, etc.  
2. Animals need water for drinking and bathing.  
3. Rain, rivers, lakes, wells, etc. are the various sources of water.  
4. Mixing of unwanted particles, garbage is called water pollution.

### Hot Question

If there is no rain for a long time, plants can not grow, animals will start to dies due to thirst. There will be a shortage of water and food.

### Activity



6

## World of Plants

- A. 1. The stem of climbers is very weak so they need support to grow upward.  
2. Desert plants have thorns to reduce the loss of water.
- B. 1. (c); 2. (b); 3. (c); 4. (a)
- C. 1. True; 2. False; 3. True; 4. True
- D. 1. shrub; 2. Watermelon; 3. Cactus; 4. herb
- E. 1. Rose; 2. Tulsi; 3. Watermelon; 4. Cactus
- F. 1. Very big and strong plant is called tree.  
2. Small bushy and hard stemmed plant is called a shrub.  
3. Small and green stemmed plant is called a herb.  
4. Creepers have very weak stem and heavy fruits or vegetables so they cannot stand erect. So they creep along the ground.

### Hot Question

Green stem of desert plants make food for plants.



7

## Animals : Our Friends

- A. 1. A snake has no feet so it crawls on the ground.  
2. Feathers of a birds help it to fly.
- B. 1. (b); 2. (a); 3. (b); 4. (b)
- C. 1. False; 2. False; 3. False; 4. True
- D. 1. Snake; 2. giraffe; 3. two; 4. six
- E. 1. Bear; 2. Hen; 3. Honeybee; 4. Mosquito
- F. 1. We domesticate animals for our use like cow gives us milk.  
2. Animals that live in jungle, are called wild animals.  
3. Animals that eat products of plants, are called herbivorous animals.  
4. Animals that eat both products of plants and flesh of animals are called omnivorous animals.

### Hot Question

Flesh eater animals cannot find their food if all deer, zebra, etc. die. They also start to die.





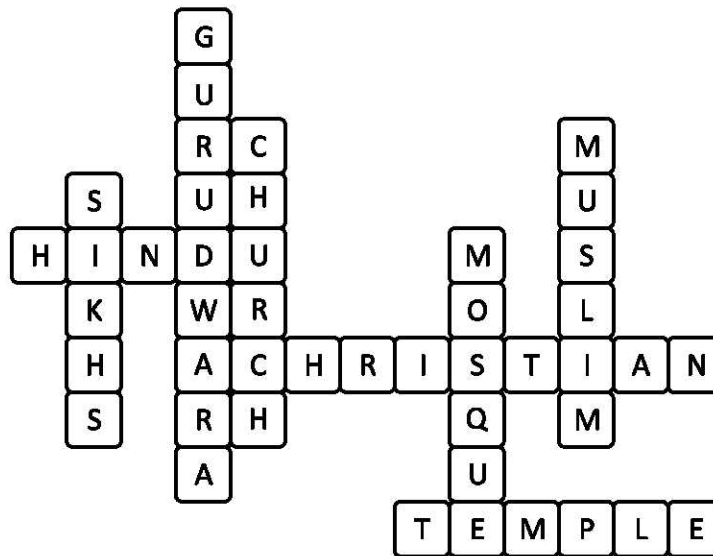
3. An electrician repairs our electric equipments.
4. A gardener looks after our garden.

## 11

## Places of Worship

- A. 1. We go to temple to worship the Gods and Goddesses.  
2. The sikhs go to gurudwara to pray gurus.
- B. 1. (b); 2. (a); 3. (c); 4. (b)
- C. 1. True; 2. False; 3. True; 4. True
- D. 1. mosque, Allah; 2. temple; 3. church; 4. gurudwara
- E. 1. Mosque; 2. Church; 3. The Quran; 4. The Sikhs

### Activity



## 12

## Food

- A. 1. Animals need food to get energy.  
2. We take breakfast in the morning.
- B. 1. (c); 2. (a); 3. (b); 4. (b)
- C. 1. True; 2. False; 3. True; 4. False
- D. 1. morning; 2. fresh; 3. wash; 4. milk
- E. 1. Cereals; 2. Fruits and vegetables; 3. Dinner; 4. Washing Hand/Rinse our mouth.
- F. 1. We need food to get energy and to grow proper.  
2. Energy giving foods, body building foods and healthy foods are different types of food.  
3. Fruits and vegetables give us good health and keep us fit.  
4. Two good food habits are :
  - a. We must wash our hands before and after eating food.
  - b. We should chew our food properly.

### Hot Question

Milk is called a complete food because it gives us energy and make us strong.

- A. 1. Clothes cover our body and keep us away from dirt.  
2. Sheep, camel, yak and angora goat.
- B. 1. (c); 2. (a); 3. (b); 4. (c)
- C. 1. False; 2. True; 3. True; 4. False
- D. 1. woollen; 2. sweat; 3. warm; 4. raincoat
- E. 1. Cotton clothes; 2. Wool; 3. Fancy clothes; 4. Uniform
- F. 1. We wear clothes to cover our body. They protect us from heat, cold, rain, dust, etc.  
2. They absorb the sweat from our body and keep us cool.  
3. We wear woollen clothes to keep ourselves warm.  
4. We wear special kind of dress called a uniform.

**Hot Question**

Flower of cotton plants is used for making clothes.

- A. 1. Mud, bamboo, straw, etc. are used to make kuchcha houses.  
2. Igloos are made up of blocks of ice.
- B. 1. (b); 2. (c); 3. (c); 4. (b)
- C. 1. False; 2. False; 3. False; 4. True
- D. 1. mud, straw; 2. Caravan; 3. Gypsies; 4. Eskimos
- E. 1. House; 2. Horse; 3. Soldiers, NCC Cadets; 4. Eskimos
- F. 1. We need a house to live in. It protects us from heat, cold, rain, thieves, animals, etc.  
2. A Kuchcha house is a temporary house. It is built up of mud, bamboo, etc.  
3. A pucca house is a permanent house. It is built up of iron, cement, bricks, etc.  
4. A caravan is a moving house, it is pulled by horse.

**Hot Question**

Igloos are made in polar regions where temperature is very low so igloos do not melt.

- A. 1. National festival are celebrated in the honour of country.  
2. Dussehra marks the victory of good over the evil.
- B. 1. (b); 2. (c); 3. (b); 4. (b)
- C. 1. False; 2. True; 3. False; 4. True
- D. 1. nine; 2. colours; 3. Lakshmi; 4. Langar
- E. 1. 26th January; 2. Lakshmi; 3. Sikhs; 4. Santa claus
- F. 1. We celcbrate Republic Day because on this day, India became republic (of citizens).  
2. On this day, India became free from British empire.  
3. Diwali is the festival of light.  
4. Gurupurab is celebrated to mark the birthday of their first Guru Guru Nanak Dev.

### Hot Question

On this day, Holika (the aunt of Prahlad) was burnt in fire even she wanted to burn Prahlad in the fire. From that day, we celebrate holi.



16

## Recreations (Fun and Play)

- A. 1. Things which are done for our entertainment, are called means of recreation.  
2. We see different types of animals in zoo.
- B. 1. (b); 2. (a); 3. (c); 4. (c)
- C. 1. True; 2. True; 3. False; 4. True
- D. 1. indoor; 2. outdoor; 3. zoo; 4. circus
- E. 1. Yes; 2. No; 3. Yes; 4. Yes
- F. 1. We need the means of recreation to refresh our mind.  
2. The games which are played outside the home, are called outdoor games.  
3. We go to amusement park for picnic.  
4. We see animals and artists, different types of tricks.

### Hot Question

We will too much tired and boring if we do not have entertainment.



17

## Healthy and Good Habits

- A. 1. We should brush our teeth in the morning and before going to bed at night.  
2. We should say sorry when we hurt somebody.
- B. 1. (b); 2. (a); 3. (c); 4. (b)
- C. 1. B; 2. G; 3. G; 4. B
- D. 1. chew; 2. milk; 3. sorry; 4. old
- E. 1. Early in night; 2. Playground; 3. Rinse our mouth; 4. Handkerchief
- F. 1. (i) We should say sorry if we hurt somebody.; (ii) We use handkerchief after sneezing.  
2. Playing keep our body healthy and fit.  
3. (i) We should not talk while eating food.; (ii) We keep our mouth close while eating food.  
4. We should say 'thank you' when we take anything from somebody.

### Hot Question

We can take fresh air when we take exercise in open area.



18

## Safety Rules

- A. 1. We can fall if we stand in a moving bus.  
2. We should not play with fire because it may cause of accident.
- B. 1. (c); 2. (b)
- C. 1. False; 2. True; 3. False; 4. False
- D. 1. zebra crossing; 2. go; 3. safety; 4. banana,
- E. 1. At zebra crossing; 2. Red light; 3. At park; 4. At ground.

- F. 1. We cross road only when the signal is red because all vehicles stop at red light.  
2. (i) Do not lean out of windows. (ii) Do not stand in a moving bus.  
3. (i) Do not fly kites on open terrace. (ii) Do not play with sharp things.

**Hot Question**

We should cross the road at zebra crossing because vehicles stop at zebra crossing.



- A. 1. The sun gives us heat and light.  
2. There are millions of stars in the sky.
- B. 1. (c); 2. (a); 3. (a)
- C. 1. model; 2. rises; 3. sun; 4. night
- D. 1. on the earth; 2. in the west; 3. yes
- E. 1. A globe is a model of the earth.  
2. The sun is big ball of hot gases.  
3. The moon reflects the light of the sun and moves around the earth and the sun. So it seems to change the shapes.  
4. Stars have dim light so they do not appear in the day in the presence of bright light of the sun.



- A. 1. We see different types of plants, trees, animals, etc. in the park.  
2. Animals need food to get energy.
- B. 1. (b); 2. (c); 3. (a); 4. (b); 5. (a)
- C. 1. False; 2. True; 3. False; 4. True; 5. True
- D. 1. Plants; 2. Animals; 3. reproduce; 4. artificial; 5. walk;
- E. 1. Living and Non-living things; 2. Plants and animals; 3. Sun, Mountain; 4. Man-made things are called artificial things; 5. chair, car, bus, computer
- F. 1. We see different types of objects like plants, animals, car, bus, etc. in our surroundings.  
2. (a) Living things need air to breath. (b) Living things need food to eat.  
3. The things that occur naturally without any planning are called natural things.  
4. The things which have not characteristics of life such as growth, reproduce, movement etc. are called non-living things.

5.	Living things	Non-living things
	1. They breathe	1. They do not breathe.
	2. They need water to drink.	2. They do not need water.
	3. They need food to eat.	3. They do not need food.
	4. They can feel.	4. They cannot feel.

**Hot Question**

Plants show the characteristics of life like growth, reproduce, etc. but fruit does not show when it become separate from plant.



- A. 1. The stem of tulsi is green and it lives for one year only so it is called herb.  
2. Desert plants have thorns to reduce the loss of water.
- B. 1. (a); 2. (b); 3. (a); 4. (c); 5. (b)
- C. 1. True; 2. False; 3. False; 4. True; 5. False
- D. 1. sugarcane; 2. Lotus; 3. Cactus; 4. Apple; 5. jute
- E. 1. Hard and strong stem is called trunk; 2. Pumpkin and watermelon; 3. Teak and pine  
4. Neem and tulsi; 5. Acacia
- F. 1. Plants that have very weak stem and cannot erect upward without any support, are called climbers like money-plant, pea.  
2. Plants that grow on land are called terrestrial plants.  
3. Desert plants have thorns to prevent the loss of water.  
4. Plants that grow in water, are called aquatic plants.  
5. We get food, pulses, oil, spieces, medicines, wood, etc. from plants.

**Hot Question**

Climbers and creepers, both gave weak stem but creepers have heavy fruits or vegetables like watermelon and pumpkin. So, they cannot erect upward.





### 3

## The World of Animals

- A. 1. Animals that live on land as well as in water, are called amphibians.  
2. Scavengers eat dead remains of the animals so they help to clean the jungle.
- B. 1. (c); 2. (c); 3. (b); 4. (a); 5. (c)
- C. 1. True; 2. False; 3. False; 4. True; 5. True
- D. 1. Dog; 2. Frog; 3. herbivorous; 4. carnivorous; 5. omnivorous.
- E. 1. Cow, Dog; 2. Frog, Crocodile; 3. Bear, Elephant; 4. in shed; 5. coop
- F. 1. Some animals are useful for us so we domesticate them.  
2. Milk giving animals are called milch animals like cow, buffalo, goat, etc.  
3. Animals that live in jungle are called wild animals.  
4. Animals that live in water are called aquatic animals.  
5. Animals that eat both plants and flesh of other animals, are called omnivorous animals.

### Hot Question

Canines help to tear the flesh of animals so carnivorous animals have sharp and long canines.

### Activity

1. JACKAL; 2. WHALE; 3. HOLE; 4. ELEPHANT; 5. TIGER



### 4

## Neighbourhood

- A. 1. We can withdraw our money at any time from ATM.  
2. The Hindus go to temple for worship.
- B. 1. (b); 2. (b); 3. (a); 4. (c); 5. (b)
- C. 1. postcard; 2. bank; 3. Quran; 4. Guru Granth Sahib; 5. Bible
- D. 1. People living around our home, are called neighbours.  
2. A doctor treats sick and injured people.  
3. We get postcards, inlands, envelopes, stamps, etc. from a post office.  
4. A school of small children, is called a kids school.  
5. The bible is the holy book of Christians.
- E. 1. The place around our home, is called our neighbourhood like park, school, market, post office, bank, etc.  
2. Super bazaar is so important for us because we can get buy all the items from a same place.  
3. Confectionery shop, medical shop, stationery shop and a milkbooth are four useful services in our neighbourhood.  
4. A policemen guards our houses. He catches thieves and protects our life and property.  
5. Temple, Mosque, Gurudwara and Church are the different places of worship.



### 5

## Helpers in Our Neighbourhood

- A. 1. A greengrocer sells green vegetables.  
2. A postman delivers letters door to door.

- B.** 1. (c); 2. (b); 3. (b); 4. (a)
- C.** 1. False; 2. False; 3. True; 4. True; 5. True
- D.** 1. plumber; 2. letters; 3. greengrocer; 4. chemist; 5. electrician
- E.** 1. A washerman washes our clothes.  
2. A fruitseller sells fruits.  
3. A chemist sells syringes.  
4. A confectioner sells cakes.  
5. A carpenter makes windows.
- F.** 1. A watchman guards our house.  
2. A chemist sells medicines, syringes, cotton, bandages, etc.  
3. A mason constructs our houses and buildings.  
4. A plumber repairs the leaking taps and pipes.  
5. An electrician repairs the electric lines, switch boards, etc.

#### **Hot Question**

If a watchman will not follow his duty properly then we cannot live safely.



## **6**

## **Food We Eat**

- A.** 1. We call food as a fuel of our body because it gives energy to our body.  
2. Minerals keep us away from diseases.
- B.** 1. (c); 2. (a); 3. (b); 4. (a); 5. (a)
- C.** 1. False; 2. True; 3. False; 4. False; 5. True
- D.** 1. fuel; 2. Plants; 3. vitamins, minerals; 4. Milk; 5. vegetarian
- E.** 1. Plants and animals are two main sources of food.  
2. Pulses and eggs are rich in protein.  
3. Lettuce and spinach are green vegetables.  
4. Butter and ghee are rich in fat.  
5. A milk contains fat, carbohydrate, protein, vitamins and minerals.
- F.** 1. We need food to get energy, to grow proper and to keep ourselves healthy.  
2. The food that helps us to grow well and makes our bones and muscles strong is called body building food.  
3. A balanced diet is a diet that contains all essential nutrients.  
4. We need water for digesting food and to maintain the temperature of our body.  
5. Four good food habits are :  
    a. We should wash our hands before and after eating every meal.  
    b. We should eat fresh food.  
    c. We should eat covered food.  
    d. We should chew our food properly.

#### **Hot Question**

Ghee is the rich source of fat, it provides a lot of energy. It deposits in our body as a fat so it is harmful for an adult.



- A.** 1. Cotton clothes absorb sweat of our body so they keep us cool.  
2. The climate and culture of different parts of a country are different so people wear different types of clothes.
- B.** 1. (c); 2. (a); 3. (c); 4. (c); 5. (b)
- C.** 1. True; 2. False; 3. True; 4. False; 5. True
- D.** 1. cotton; 2. wool; 3. cocoons; 4. weaver; 5. tailor
- E.** 1. We like to wear cotton clothes in summer season.  
2. It is a covering of thin threads that some insects make to protect themselves becoming an adults.  
3. We use umbrella in rainy season.  
4. A tailor stitches our clothes.  
5. A washerman washes our clothes.
- F.** 1. We need clothes to cover our body. They protect us from heat, cold, rain, etc.  
2. Woollen clothes keep us warm so we wear them in winter.  
3. We get wool from sheep.  
4. We get silk from silkworms.  
5. We use raincoat, umbrella and gumboots in rainy season.

**Hot Question**

We cut hair of sheep in summer season and hair grow again till winter season so they have no problem in winter.



- A.** 1. Mud, bamboo, straw are used in making kuchcha houses.  
2. Caravans are moving houses which are pulled by animals.
- B.** 1. (b); 2. (a); 3. (c); 4. (b); 5. (a)
- C.** 1. True; 2. False; 3. False; 4. True; 5. True
- D.** 1. Nomads; 2. ladder; 3. Kashmir; 4. Eskimos; 5. canvas
- E.** 1. Kuchcha house and pucca house are two types of houses.  
2. Some pucca houses are very big and look very good. These are called bungalow.  
3. Nomads live in caravans. They move from one place to other.  
4. Stilts are long up, right pieces of wood.  
5. People live in igloos are called Eskimos.
- F.** 1. We need house to protect ourselves from heat, cold, rain, thieves and animals. We feel safe in house.  
2. A flat is a pucca house, made in a multi-storey building.  
3. In water logging areas, houses are made on wooden poles. These houses are called stilt houses. They are safe from water. Ladder is used to go in stilt houses.

4. Igloos are the houses which are built of ice blocks. These houses are found in polar regions.
5. Five features of an ideal house are :
  - It should be neat and clean.
  - It should have sufficient sunlight and fresh air.
  - It should have proper ventilating system.
  - It should have big doors and windows to let in fresh air.
  - It should have proper drainage system.

#### Hot Question

Stilt houses are made in water logging areas because water of flood cannot enter easily in the house.



9

## Our Body

- A. 1. Brain, heart, lungs are vital organs of our body.  
2. We feel anything with our skin.
- B. 1. (b); 2. (a); 3. (c); 4. (b); 5. (a)
- C. 1. False; 2. True; 3. True; 4. False ; 5. True
- D. 1. Brain; 2. stomach; 3. Lungs; 4. bones; 5. Skeleton
- E. 1. Legs and Hands are external organs of our body.  
2. Heart and brain are two internal organs.  
3. Eyes, ears, noes, tongue and skin are five sense organs.  
4. Stomach stores the food.  
5. Skeleton gives shape to our body.
- F. 1. The parts of body which are seen, are called external parts of our body like face, head legs, etc.  
2. The organs of body which help us to know outside the world, are called sense organs.  
3. The parts of body which are not seen, are called internal parts of our body like brain, heart, liver, etc.  
4. Legs are used to walk, run, cycling, etc.  
5. Brain controls all the movements of the body. It helps us to think, learn, etc.

#### Hot Question

The bones of new born baby are soft and small in size. As he/she grows, the bones are joined and reduce in number.



10

## Keep Clean and Be Healthy

- A. 1. During eating, particles of food stick to our teeth so, rinsing of mouth is necessary.  
2. Air is fresh in the morning so we should walk in the morning.

- B.** 1. (b); 2. (a); 3. (b); 4. (a); 5. (b)
- C.** 1. False 2. True; 3. False; 4. True; 5. False
- D.** 1. germs; 2. cold; 3. hands; 4. hair; 5. outer
- E.** 1. We should wash our hands before and after eating food.  
2. We should use ear buds or towel to clean our ears.  
3. We should use nailcutter to cut our nails.  
4. We should use shampoo and oil in our hair.  
5. Running, jumping, cycling, yoga and jogging are good exercises.
- F.** 1. We should bath daily to keep our body free from germs and healthy.  
2. Two ways to keep ourselves healthy are :  
    a. Take a bath with antiseptic soap daily.  
    b. Brush your teeth twice a day.  
3. We should avoid eating sticky food items. We should brush our teeth in the morning and before going to the bed at night.  
4. We should take exercise to keep ourselves fit and active.  
5. Rest and sleep fresh our body and mind. They act as a tonic for our body.

#### **Hot Question**

We need more energy during exercises so we need more oxygen for breaking food particles into energy.



- A.** 1. Independence Day, Republic Day and Gandhi Jayanti.  
2. Mahatma Gandhi is called Bapu.
- B.** 1. (a); 2. (b); 3. (b); 4. (c); 5. (a)
- C.** 1. three; 2. 1947; 3. 26th January; 4. Bapu; 5. colourful
- D.** 1. The ratio of length to breath of our national flag is 3 : 2  
2. The President takes the salute of parade.  
3. On 26th January, 1950, constitution was applied.  
4. Children are awarded for bravery.  
5. We go to Rajghat to pay homage to Bapu.
- E.** 1. Independence Day, Republic Day and Gandhi Jayanti are our national festivals. These are celebrated by whole nation.  
2. The Prime Minister hoists national flag at Red Fort in Delhi and delivers his/her speech to the nation.  
3. The President takes salute on Republic Day. A big parade of armed forces and folk dances is held in New Delhi.  
4. 2nd October is the birthday of Mahatma Gandhi so we celebrate it as Gandhi Jayanti.  
5. People go to Rajghat and pay their homage to Bapu.

#### **Hot Question**

We celebrate Republic Day on 26th January because before Independence, this day was celebrated as Independence Day. So our constitution was applied on 26th January.

- A. 1. Dussehra is called Vijay Dashmi because on this day, Rama killed Ravana.  
2. People go to gurudwara to pray gurus and organise langar.
- B. 1. (b); 2. (c); 3. (a); 4. (c); 5. (c)
- C. 1. True; 2. False; 3. True; 4. False; 5. True
- D. 1. lights; 2. Ramlila; 3. Durga Puja; 4. Santa Claus; 5. onam
- E. 1. Desehra, Diwali and Holi are three festivals of Hindus.  
2. Durga Puja is celebrated in West Bengal.  
3. Langar is a common kitchen of Sikhs.  
4. The Sun is worshiped on Pongal.  
5. Holi, Onam and Pongal are three harvest festivals.
- F. 1. Festivals are celebration of special historical events. They bring happiness and joy.  
2. We celebrate dussehra to mark the victory of good over evil. On this day, Rama killed Ravana.  
3. On this day, Rama returned to Ayodhya with Sita and Lakshman. On this occasion, people burnt diyas. From that day, this day is celebrated as Diwali.  
4. Ramzan is the fasting month of muslims.  
5. People decorate their houses with flowers and light. A special boat race is held on this festival.

### Hot Question

Holi is called harvest festival because crop of wheat is ready to harvest.

- A. 1. Celebrations are joyous occasions.  
2. We wish our mother and give her gifts.
- B. 1. (b); 2. (a); 3. (b); 4. (a)
- C. 1. True; 2. False; 3. True; 4. True
- D. 1. Celebrations bring joy and happiness in the family.  
2. Marriage and birthday.  
3. Marriage is the special occasion of family.  
4. We cut cake and give gifts to father on father's day.
- E. 1. We celebrate family celebration with great joy. We exchange gifts.  
2. We cut cake and dance on birthday party.  
3. Marriage is a special function of family. We wear new and fancy clothes on it.  
4. We welcome new year with great joy and give greeting cards to one another.

- A. 1. Early people travelled on foot or on animals.  
2. Rockets or space ships are used to go in space.
- B. 1. (a); 2. (c); 3. (a); 4. (a); 5. (c)



- C.** 1. False; 2. False; 3. True; 4. True; 5. False
- D.** 1. Bullock-cart; 2. CNG; 3. Metro trains; 4. Submarine; 5. fastest
- E.** 1. Bullock-cart and Horse-cart are the old means of transport.  
2. There are three means of transport.  
3. Rickshaw, bus, car and scooter are the means of land transport.  
4. Metro train is a local train which runs in metropolitan cities.  
5. Submarine is a large boat that floats under water.
- F.** 1. Railways play a very important role in transportation. They carry thousands of people daily from one place to other place. They also carry goods.  
2. Vehicles that move or float on the water, are called means of water transport like ship, boat, steamer, cargo, etc.  
3. Cargo ships are goods carrying ships.  
4. Rockets are used to go into the space.  
5. Aeroplanes carry hundreds of people at one time but helicopter can carry only 4-5 persons. So, aeroplanes are more useful than helicopters.

#### Hot Question

Submarine are used in navy. They float under water because enemies cannot see submarines and we can protect ourselves from enemies.



- A.** 1. Carelessness is the main cause of accidents.  
2. Cotton, bandage, dettol or savlon, scissors, antiseptic cream, etc.
- B.** 1. (a); 2. (b); 3. (b); 4. (a); 5. (c)
- C.** 1. False; 2. True; 3. True; 4. False; 5. True
- D.** 1. zebra crossing; 2. blade; 3. wet; 4. swimming; 5. road
- E.** 1. We should walk on footpath.  
2. Green light means go.  
3. We should play in open like ground, park, etc.  
4. Playing fire may cause of accidents.  
5. Knife and blade.
- F.** 1. (i) Never play on the road.                      (ii) Never run on the road.  
2. We should not stand in a moving bus and do not lean out any body part from window.  
3. We should never go alone for swimming and use air-filled tube.  
4. 1. Never play with fire.                      2. Never play with sharp things.  
5. The immediate treatment given to an injured person before arrival of a doctor, is called first aid.

#### Hot Question

Red light is used to stop vehicles because it is seen from a far place.

- A.** 1. Letters, telephone, fax machine, E-mail.  
2. Mobile can be used in moving position also.
- B.** 1. (a); 2. (c); 3. (a); 4. (b); 5. (a)
- C.** 1. True; 2. False; 3. True; 4. True; 5. False
- D.** 1. 3500; 2. mass; 3. 1300; 4. Mobile phone; 5. E-mail
- E.** 1. Verbal communication to one another, is called speech.  
2. Television, radio, newspaper and magazines.  
3. Television is more popular because we can listen and see the pictures also.  
4. Mobile phone is the most revolutionary invention of science and technology.  
5. Letters (Mobile also) are the cheapest means of communication.
- F.** 1. The process of exchanging informations with one another, is called communication.  
2. Sending a message to a large number of people at one time, is called mass communication.  
3. Mobile phone is more useful than telephones because we can talk on mobile in moving condition also. Multimedia mobile phones have the facilities of songs, photos, internet, etc.  
4. Fax is a machine that sends and receives printed messages along telephone wires.  
5. E-mail is an electronic message. It is sent through computer with the help of the internet.

#### Hot Question

We can get a lot of informations on internet. So, it is means of mass communication. We can send E-mail so it is means of personal communication.

- A.** 1. The shape of the earth is round.  
2. The sun gives us heat and light.
- B.** 1. (c); 2. (a); 3. (b); 4. (b); 5. (b)
- C.** 1. True; 2. True; 3. False; 4. True; 5. False
- D.** 1. light; 2. model; 3. blue; 4. 29; 5. hot
- E.** 1. The earth is called a unique planet.  
2. We see stars at night.  
3. Moving of the earth around the sun, is called revolution.  
4. Movement of the earth on its own axis, is called rotation.  
5. The sun is a ball of hot glowing gases.
- F.** 1. It is the area beyond the earth's atmosphere where the stars and planets exist.  
2. Our space itself is a part of this vast space. This space is called the universe.  
3. Stars are huge ball of burning gases. They have their own heat-light.

4. A globe is a model of the earth.

5. The surface of the earth is covered with water (about 71%) so, it is called a blue planet.

### Hot Question

The moon reflects the light of the sun and moves around the earth and the sun. The part of the moon that receives light, is visible. So it seems to change its position.



- A. 1. Lemon juice contains 'vitamin c' and it is good for skin.  
2. Dark clouds indicate rain and storm.
- B. 1. (c); 2. (a); 3. (c); 4. (b); 5. (a)
- C. 1. False; 2. True; 3. True; 4. False; 5. True
- D. 1. weather; 2. summer; 3. storm; 4. winter; 5. spring
- E. 1. A strong wind with lightning, thunder and heavy rain is called storm.  
2. A very bright flash of light in the sky during thunderstorm is called lightning.  
3. A very strong storm is called cyclone.  
4. Spring season starts from February and continuous till March.  
5. We wear woollen clothes in winter season.
- F. 1. Weather is the condition of rain, heat, wind at a particular place and time. It is affected by rain, heat of sun, wind etc.  
2. It is very hot on a sunny day. We like to wear cotton clothes. We like to eat ice-creams and to drink cold soft drinks.  
3. There are five main seasons in India– spring season, summer season, rainy season, autumn season and winter season.  
4. Hot dry wind are called loo. They blow in summer season.  
5. We feel relief in rainy season after a hot spell of summer.

### Hot Question

Trees shed off leaves during autumn because to prevent the loss of water.



- A.** 1. All living things need air (oxygen) to breathe.  
2. The process of converting water into water vapour on heating, is called evaporation.
- B.** 1. (b); 2. (c); 3. (a); 4. (b); 5. (c)
- C.** 1. False; 2. True; 3. True; 4. True; 5. False
- D.** 1. skin; 2. stomata; 3. water; 4. energy; 5. wings
- E.** 1. Yes, plants breathe.  
2. Yes, animals need water for drinking and bathing.  
3. Yes, plants show movement as sunflower turn towards sun.  
4. Yes, all living things die.  
5. No, all plants do not grow from seeds.
- F.** 1. Living things need air for breathing.  
2. Fish respire through gills.  
3. Plants respire through stomata which are present on the leaves.  
4. Plants need water to make food.  
5. Green plants make their own food with the help of water, minerals and carbon dioxide in the presence of sunlight. This process is called photosynthesis.

**Hot Question**

If living things do not reproduce then race of living things would be finished.



- A.** 1. We feel air when it blows.  
2. We need fresh air because its free from pollution so, it is good for health.
- B.** 1. (b); 2. (c); 3. (a); 4. (b); 5. (a)
- C.** 1. False; 2. True; 3. True; 4. False; 5. False
- D.** 1. breeze; 2. Oxygen; 3. Sound; 4. diseases; 5. clean
- E.** 1. Moving air is called wind.  
2. Slow moving air is called breeze.  
3. Air is made up of many gases like oxygen, nitrogen, carbon dioxide, etc.  
4. Sound needs a medium to propogate.  
5. Asthma and skin allergy are caused by air pollution.
- F.** 1. We need air for breathing. Oxygen is necessary for oxidation of food which give us energy.  
2. Smoke emitted from vehicles, factories is main cause of air pollution.  
3. Photosynthesis is a process in which green plants make their own food in the presence of sunlight with the help of water, minerals and carbon dioxide.  
4. When we place a glass over a lighted candle, it goes off after sometime. It proves that air is necessary for burning.

5. Four prevention of air pollution are :

- Vehicles should be checked properly.
- Garbage should be thrown into covered dustbin.
- Stop exploding fire crackers.
- Plant more and more trees.

#### Hot Question

Plants need oxygen for oxidation of food and carbon dioxide for making food.



### 3

## Water

- A. 1. River water is polluted by throwing garbage, bathing animals etc.  
2. Farmers draw ground water to the surface with the help of tube-well. This water is used for irrigation.
- B. 1. (c); 2. (b); 3. (a); 4. (c); 5. (a)
- C. 1. False; 2. False; 3. True; 4. True; 5. False
- D. 1. Rain-water; 2. fit; 3. drinking; 4. Handpump; 5. salty
- E. 1. Fish, octopus, crocodile, tortoise  
2. Rain is the natural source of water.  
3. Pond is a small depression in the ground filled with water.  
4. Sea water is salty, so it is not fit for drinking.  
5. Animals need water for drinking and bathing.
- F. 1. Human beings need water for drinking, cooking, bathing, cleaning, etc. Animals need water for drinking and bathing. Plants need water for making food.  
2. River water is polluted by throwing garbage by people, so it is not fit for drinking.  
3. Underground water is clean water because when it is percolating down, it gets filtered from the various layers of sand and gravel. So it is fit for drinking.

#### Hot Question

Melting ice is the cause of water in river so if ice does not freeze on mountains then flow of water in rivers would be stopped.



### 4

## The World of Plants

- A. 1. Neem and tulsi.  
2. The hard and woody stem is called trunk.
- B. 1. (c); 2. (c); 3. (b); 4. (a); 5. (c)
- C. 1. False; 2. True; 3. False; 4. True; 5. False
- D. 1. Tulsi; 2. climber; 3. creeper; 4. two; 5. Root
- E. 1. Very big plant is called a tree. Its stem is hard and strong.  
2. Herb is used as a medicine.  
3. Bushy plant has a lot of branches and leaves very close together.

4. The plant that creeps along the ground is called creeper.
  5. Fibrous roots are many root growing from the base.
- F. 1. Plants are very useful for us. They give us food grains, vegetables, fruits. They purify air.
2. Roots absorb mineral and water from the soil. They also fix plant to the ground.
  3. Stem transports water, minerals from roots to other parts of the plants. It also transports prepared food to different parts of the plant.
  4. Green leaves prepare food for plants so they are called food factory of plants.
  5. There are two types of roots :
    - Tap Root** : There is one long root, many small roots grow on it.
    - Fibrous Root** : There are numerous root grow from base.

#### Hot Question

Creeper have weak stem so they creep along the ground. So, they bear heavy fruits.



## 5

## Habitat of Plants

- A. 1. Mangrove plants have special roots for exchange of gases, these roots are called respiratory roots.
2. Due to little rainfall, desert plants do not attain much height.
- B. 1. (b); 2. (a); 3. (c); 4. (b); 5. (a)
- C. 1. False; 2. False; 3. False; 4. True; 5. False
- D. 1. Apple; 2. coastal; 3. dead; 4. Amarbel; 5. underwater
- E. 1. Apple is the main fruit of hilly regions.
2. Banana, coconut, cashew and chickoo.
3. Area near coastal region is called marshy area.
4. Aquatic plants which are fixed in the soil at the bottom of pond by a long hollow stem are called fixed floating plants.
5. Hydrilla helps in cleaning the water so we grow hydrilla in aquarium.
- F. 1. The plants that grow on the land are called terrestrial plants.
2. Trees of mountains are very tall, they grow upwards not sideways. Their shape is like a cone.
3. Mangrove plants have respiratory roots because soil is clayey here and does not have enough space air for breathing.
5. Parasitic plants obtain their food from other plant or living things such as amarbel.

#### Hot Question

The soil where mangrove plants grow is clayey so it does not have enough space or air for breathe. So they have special respiratory roots for breathing.



## 6

## The World of Animals

- A. 1. Some animals like cow, buffalo, goat, hen give us many useful products so we keep animals on farm.



2. Aquatic animals breathe through gills.
- B.** 1. (c); 2. (b); 3. (c); 4. (a); 5. (c)
- C.** 1. True; 2. False; 3. False; 4. True; 5. False
- D.** 1. Cheetah; 2. Giraffe; 3. fat; 4. Penguins; 5. Crocodile.
- E.** 1. Lion, Elephant, bear and zebra.  
2. Polar bear, penguin, yak and silver fox.  
3. Ostrich, kiwi, penguin and Emu.  
4. Whale breathes through blowhole, located on the top of its head.  
5. Cheetah is the fastest animal.
- F.** 1. The animals that live on the land are called terrestrial animals.  
2. The animals that live mostly on the trees are called arboreal animals.  
3. Animals that live in the forest are called wild animals.  
4. Animals that live mostly in the air are called aerial animals.  
5. Animals that live on the land as well as in water, are called amphibians.

#### Hot Question

Animals that live in cold regions have fur on their body and fat under skin to keep themselves warm.



## 7

## Creepy Crawlies

- A.** 1. Snakes crawl on the ground with the help of scales.  
2. Earthworm makes soil fertile so it is helpful for farmers.
- B.** 1. (b); 2. (b); 3. (c); 4. (b); 5. (c)
- C.** 1. True; 2. True; 3. True; 4. False; 5. False
- D.** 1. Crocodile; 2. Tortoise; 3. legs; 4. Leech; 5. legs
- E.** 1. Snake gets energy from sunrays when it eats nothing.  
2. A lizard eats insects.  
3. A crocodile live in water as well as on land.  
4. Snail is very slow moving crawling animal. It lives in water as well as on land.  
5. Leech is a blood sucking worm.
- F.** 1. Some animals creep along the ground, such types of animals are called creepy crawlies.  
2. The body of a snake is flexible, it is covered with overlapping scales. It does not have legs and external ears.  
3. A lizard has four small legs and movable eyelids. Its tail is detachable and it can grow again.  
4. A tortoise has a hard covering shell. It withdraw its head, legs and tail in the shell to protect itself from enemies.  
5. Centipede a small crawling animal. It has several tiny legs and it is poisonous. Millipede has numerous legs and moves very slowly in a wave like motion.

#### Hot Question

Flexible body of a snake helps to move and to die enemies.

- A.** 1. Vegetables are different eatable parts of the plant like root, stem, leaf, flower etc.  
2. Pulses make our body strong because they contain proteins.
- B.** 1. (b); 2. (b); 3. (a); 4. (c); 5. (c)
- C.** 1. True; 2. False; 3. True; 4. False; 5. True
- D.** 1. Food; 2. stem; 3. Pulses; 4. bhatura; 5. hens, ducks
- E.** 1. Potato, onion, ginger are the stem of plant.  
2. Suji is used to make halwa, dhokla, etc.  
3. Persons who eat meat are called non-vegetarians.  
4. Milk is a complete food because it contains all essential nutrients.  
5. Papaya, guava are fibrous fruits.
- F.** 1. We need food to live and grow.  
2. Carrot, radish, turnip and sweet potato are obtained from roots of the plants.  
3. Food grains and pulses are the dried seeds of some plants. Wheat, rice, maize, bazra are the food grains. Arhar, moong, gram, massor are the pulses.  
4. Food that helps us to grow, is called body-building food. Such type of food are rich in proteins.  
5. Fruits and vegetables are rich in vitamins and minerals. They keep us away from disease so they are called protective food.

#### Hot Question

Our immunity system would become weak if we do not eat fruit and vegetables. Our body cannot fight against disease causing germs.

- A.** 1. We should wash our hands before and after eating food. We should chew our food properly.  
2. We should walk on the footpath and we should cross the road at zebra crossing.
- B.** 1. (c); 2. (b); 3. (a); 4. (b); 5. (c)
- C.** 1. False; 2. True; 3. False; 4. True; 5. False
- D.** 1. nutrients; 2. eating; 3. flexible; 4. park; 5. dettol
- E.** 1. We should eat fresh fruits and vegetables with good diet for being healthy.  
2. Massage keeps our muscles in motion and make them strong.  
3. Running, playing, cycling and yogasans are good exercises.  
4. Zebra crossing is place where black and white strips are made on the road.  
5. We should walk on the footpath.
- F.** 1. We should wash our hands before eating because our hands have many diseases causing germs and they will enter in our body with meal.

2. Nails contain many germs so we should trim them regularly.
3. Two safety rules at school are :
  - Do not stand on the benches and chairs.
  - Do not push each other at slides.
4. Two safety rules at home are :
  - Do not play with sharp objects like blade, scissors, knife, etc.
  - Do not play with fire.
5. The immediate help given to an injured person or sick persons is called first aid.

#### Hot Question

If we do not take exercise daily then our muscles and bones would become weak and stiff.



**10**

## Shelter

- A.
  1. Domestic animals live in man-made shelters.
  2. Stilt houses make in flood prove areas since flood water cannot enter in the house.
- B. 1. (c); 2. (a); 3. (a); 4. (b); 5. (b)
- C. 1. True; 2. False; 3. False; 4. True; 5. False
- D. 1. man-made; 2. Tents; 3. Dal lake; 4. Stilt houses; 5. Eskimos
- E.
  1. A rabbit lives in a burrow.
  2. Poor people live in kuchcha houses.
  3. Gypsies live in caravan.
  4. House-boats are popular in Dal lake in Shri Nagar.
  5. Multistorey building are called skyscraper.
- F.
  1. A shelter provides safety against danger and protection against from harsh weather conditions.
  2. Wild animals live in natural shelters.
  3. Kuchcha houses are temporary houses. They are made up of straw, mud, bamboo, etc.
  4. Stilt houses are made on a raised platform on wooden poles. The water can enter in the raised houses. They are made in flood prove areas.
  5. A flat is a pucca house, made in a multi-storyed building.

#### Hot Question

Igloos are made in very cold regions so they do not melt.



**11**

## Transport

- A.
  1. Vehicles that help to go from one place to other place are called means of transport.
  2. People go into space by rocket or space ship.
- B. 1. (c); 2. (b); 3. (c); 4. (b); 5. (a)
- C. 1. True; 2. False; 3. False; 4. True; 5. False
- D. 1. villages; 2. big cities; 3. loads; 4. yacht; 5. Air transport
- E.
  1. We use cycle, rickshaw, motorcycle to go nearby places.
  2. A train stops on a platform or railway station.

3. A hovercraft floats on water as well as moves on land on a thin cushion of air.
  4. A ferry carries people for a short distance as a regular service.
  5. A helicopter is mean of transport, it can carry only 4-6 people at a time.
- F.
1. Rickshaw, motorcycle, scooter, bus, truck, trains are the different means of land transport.
  2. Metro trains move in metropolitan cities.
  3. The vehicles that float on the water are called means of water transport.
  4. A cruise is a ship with all facilities like hotel, swimming pool, club, etc.
  5. The vehicles that fly in the air at are called means of air transport.

### Hot Question

Air transport is the fastest and the most useful transport. We can go easily at far away places only in few hours. If means of this transport are not available, life would become very slow.



**12**

## Communication

- A.
1. Crying is the way of communication of a small baby.
  2. A fax machine is attached with telephone wire. It is used to send or receive written messages.
- B.
1. (c); 2. (a); 3. (c); 4. (c); 5. (a)
- C.
1. True; 2. True; 3. False; 4. False; 5. False
- D.
1. Telegram; 2. Mobile; 3. mass; 4. E-mail; 5. fax
- E.
1. A postman delivers letters door to door.
  2. Graham Bell invented telephone.
  3. SMS means short messages service. SMS can be sent through mobile phones.
  4. Television is the most popular means of mass communication.
  5. E-mail means electronic mail, it is sent through internet.
- F.
1. Communication is the way of sending and receiving messages. We share our feelings, thoughts, ideas through communication.
  2. A post office is a place where we buy postage stamps and letters. We send our messages though post office. It is the cheapest means of communication.
  3. Mass communication means to any means of communication that sends messages to a large number of people almost at the same time.
  4. Fax machine is attached to the telephone wire. It is used to send or receive written messages.
  5. Mobile phone is more useful to us because we can talk on it in moving condition also. We can send E-mail, take photo, etc. through it.

### Hot Question

With the help of mobile phone, we can talk to any person at any time and at any place. If mobile phones are banned then the life would become very slow and difficult.

- A.** 1. The earthen pots are put in fire to make them strong.  
2. We use diyas on Diwali.
- B.** 1. (c); 2. (a); 3. (c); 4. (a); 5. (b)
- C.** 1. True; 2. False; 3. True; 4. True; 5. False
- D.** 1. cook; 2. strong; 3. vessels; 4. Matakas; 5. Diyas
- E.** 1. Pottery is the art of forming clay into vessels and other things to keep things.  
2. Early man needed vessels to store food items and to cook food.  
3. Potter's wheel is used to give the shape of vessel.  
4. Vessels are put in fire to make them strong.  
5. Mataka, surahi and diyas are popular clay vessels.

**Hot Question**

Water becomes cool in surahi due to evaporation. Water is evaporated from the outer surface of the surahi and it takes heat of water inside the surahi so water inside the surahi becomes cool.

- A.** 1. Early human beings used wheel under the sledge.  
2. We fill air in tube now-a-days.
- B.** 1. (a); 2. (c); 3. (c); 4. (c); 5. (b)
- C.** 1. True; 2. False; 3. False; 4. True; 5. False
- D.** 1. wood; 2. tool maker; 3. comfortable; 4. electricity; 5. round
- E.** 1. Wheel was the great invention in the life of man.  
2. Logs of wood were tied together to make raft. It was used to sail on water.  
3. One day when early man saw that a log of wood was rolling down then he got the idea of making wheel.  
4. Spokes make a wheel lighter and stronger.  
5. We use modern wheels today which are made up of rubber.

**Hot Question**

Tyres are fitted with tubes to hold air inside them. So, tubes are necessary for tyres.

- A.** 1. Water is polluted due to adding garbage into water bodies. Factories throw their waste into nearby water bodies. Animals also pollute water by bathing in them.  
2. Soil pollution affects the growth of plants and decreases the quality of crop.
- B.** 1. (b); 2. (c); 3. (b); 4. (c); 5. (b)
- C.** 1. False; 2. True; 3. True; 4. False
- D.** 1. clothes, 2. skin allergy; 3. Paper; 4. non-biodegradable; 5. newspapers
- E.** 1. Pollution means adding impurities in air, water and soil.

2. Diseases caused by water pollution are jaundice, diarrhoea, stomach upset, etc.
  3. Mixing of unwanted things like adding garbage, pesticides into soil is called soil pollution.
  4. Old newspapers, magazines are reused to make paper bag.
  5. Recycle means to use waste materials into useful material like metals are melted to make new things.
- F.
1. Throwing garbage, wastes of factories, bathing of animals in water bodies, washing clothes near water bodies are the main causes of water pollution.
  2. Smoke emitted from vehicles, factories are the causes of air pollution.
  3. The things which are decomposed by the action of microbes, are called biodegradable substances.
  4. The things which do not decompose by the action of microbes are called non-biodegradable substances.
  5. We can save environment by reducing the use of non-biodegradable substances, by reusing the substances and by recycling.

#### **Hot Question**

Polythene is a non-biodegradable substance so its use is dangerous for all living things. It is the main cause of pollution. If use of polythene is not reduced then it would be dangerous for environment.



## Internal Organs of The Body

- A.** 1. Brain controls all the activities of body. The brain helps us to think, imagine, remember and understand.  
2. Food is completely digested in small intestine. Small intestine secretes digestive juice to digest the food.
- B.** 1. (c); 2. (b); 3. (c); 4. (a); 5. (c)
- C.** 1. True; 2. False; 3. False; 4. True; 5. True
- D.** 1. Brain; 2. Heart; 3. Arteries; 4. bile; 5. Liver
- E.** 1. The right side of the brain is involved in music, art, use of symbols, etc.  
2. The heart is almost the size of our fist.  
3. Veins carry blood back to the heart.  
4. The diaphragm is the muscle below the lungs that expands and relaxes, thus controls the breathing process.  
5. Bile juice helps in the digestion of fat.
- F.** 1. The organs which are not visible externally, are called internal organs like liver, brain, heart, lungs, kidneys, etc.  
2. Brain controls all the functions of body such as breathing, digesting food and pumping of the heart. It helps us to think, imagine, remember and understand.  
3. The heart pumps blood to all parts of the body through the blood vessels.  
4. The walls of the stomach have glands that produce of digestive juices. The digestive juices mix with the food to help in digestion.  
5. Lungs help in the process of breathing. Lungs supplies our body with oxygen present in the air. They also expels carbon-di-oxide.

### Hot Question

Brain controls all the functions of our body even working of heart, lungs, kidneys so it is called engine of our body.

## Types and Care of Teeth

- A.** 1. Teeth help us to chew the food, to cut anything. They also give shape to our face and help us to speak well.  
2. We should brush our teeth twice a day, once in the morning and before going to sleep. We should eat calcium rich food and avoid sticky food and sweets.
- B.** 1. (c); 2. (b); 3. (b); 4. (b); 5. (c)
- C.** 1. False; 2. False; 3. False; 4. True; 5. True
- D.** 1. Saliva,; 2. temporary; 3. Enamel; 4. Incisors,; 5. plaque
- E.** 1. Saliva is the watery liquid that forms in mouth and helps to chew and digest the food.  
2. Enamel is the hardest substance in our body which covers teeth.

3. A thin sticky yellow film on our teeth, is called plaque. They produce a sour substance called an acid which eats away the enamel.
4. Cavity is a hole between teeth. It is formed due to germs present on teeth.
5. Sweet, salty, bitter and sour are four taste buds on the tongue.

F. 1. Functions of teeth are :

- They help us to bite and chew our food.
  - They help us to cut anything.
  - They give the natural shape to our face.
  - They help us to speak well.
2. When tiny bits of food get stuck in the gaps between our teeth, germs or bacteria grow very fast on these bits of food. They form a thin and sticky film on our teeth, which eats away the enamel. This is the cause of tooth decay.
  3. Canines are used for tearing and grabbing the food.
  4. Premolars help to crack hard food into smaller pieces and to crush, grind the food.
  5. Tongue is a strong muscular organ and it has small bumps on its surface, called taste buds. It helps to taste sweet, salty, bitter and sour. It also help us to speak.

#### **Hot Question**

If we eat chocolate at night and sleep without brushing the teeth, it stick to our teeth and cause germs in it.



### **3**

## **Care of Body Parts**

- A. 1. We should keep clean our body parts to keep ourselves healthy.
2. Many diseases causing germs enter in our hand when we play or do other things so we should wash our hands with antiseptic soap.
- B. 1. (b); 2. (a); 3. (c); 4. (b); 5. (a)
- C. 1. False; 2. True; 3. False; 4. True; 5. True
- D. 1. face; 2. head, 3. disease; 4. hands; 5. daily
- E. 1. Hair protects our head from direct sunlight and cold.
2. We should use cotton buds to clean our ears.
3. We should clean our nose when we bath or when we wash our face.
4. We should use oil in hair after bath.
5. We should clean our tongue with tongue cleaner.
- F. 1. We should wash our face with water three-four times a day to clean disease causing germs which affect our skin.
2. We should wash our hands and feet with antiseptic soap after playing because many diseases causing germs enter in our body during playing.
3. We should trim our nails weekly because diseases causing germs live in the nails.

4. We should wash our eyes with cold water many times in a day.
5. We should wash our skin with antiseptics soap to remove dust and sweat.

### Hot Question

If we do not take bath daily then many diseases causing germs enter to our body and we may fall sick.



## 4

## Plants : Our Green Friends

- A.** 1. A cluster of small roots is called fibrous root.  
2. We get oil by crushing seeds of some plants.
- B.** 1. (c); 2. (b); 3. (b); 4. (c); 5. (a)
- C.** 1. False; 2. False; 3. True; 4. False; 5. True
- D.** 1. tap; 2. Stem; 3. one; 4. carbohydrate, 5. malaria,
- E.** 1. Root remains under the ground and root hair absorb water and minerals from the soil.  
2. Shoot consists stem, branches, leaves, flowers and fruits.  
3. Flowers are the most beautiful parts of the plant. Some flower grow into fruits.  
4. Pulses are dried seeds of some plants.  
5. We get gum from juice of the stem of acacia plant.
- F.** 1. Green leaves prepare food for plants with the help of sunlight, water, mineral and carbon dioxide, this process is called photosynthesis.  
2. Functions of roots are :
  - They fix the plant to the soil.
  - They absorb water and minerals salts from the soil.
  - Some extra food is also stored in some roots.
3. Functions of stem are :
  - It gives support to plant to grow upward.
  - It conducts water and minerals from soil to different parts of the plant.
  - It also conducts food made in the leaves to different parts of the plant.
  - It also store extra food.
4. The flat part of the leaf is called the leaf blade. The upper and lower sides of a leaf blade are slightly different in colour. The upper side is smooth and dark, the lower side is rough and light in colour. There is a main vein in the middle of the leaf and other side veins. They carry food and water to all parts of the leaf.
5. Plants and trees give out oxygen during photosynthesis process so they help to reduce pollution.

### Hot Question

No, plants do not make food for us, they make food for their growth. We use only extra food stored in different parts of the plants.



- A.** 1. A special home made by butterfly for itself, is called cocoon.  
2. Queen bee lays eggs in the cells.
- B.** 1. (b); 2. (a); 3. (c); 4. (b); 5. (c)
- C.** 1. queen ant; 2. cocoon; 3. wax; 4. honey; 5. dark, damp
- D.** 1. False; 2. True; 3. False; 4. True; 5. True
- E.** 1. Queen ant lays thousands of eggs.  
2. Proboscis is a special coiled tube in the mouth of butterfly. It is used to suck up nectar.  
3. When caterpillar goes to sleep, this stage is called pupa.  
4. Honey is good source of minerals. It is good for health.  
5. Dengu and malaria are caused by mosquitoes.
- F.** 1. Butterfly lays tiny eggs on leaves. These eggs hatch into tiny worm like larvae or caterpillars. Caterpillar spends all its time eating leaves, it grows bigger and fatty everyday. After a few days, it builds a cocoon. Then the caterpillar goes to sleep, this stage called pupa. Now pupa changes into a beautiful butterfly.  
2. Hive is made from wax. It has many small cells of hexagon shape.  
3. Cockroaches leave disease causing germs on uncovered food items. Such food are harmful for us.  
4. Precautions against mosquitoes are :  
• We must not allow water to collect in empty bottles, puddes, empty tyres, etc.  
• We must keep water containers closed.  
• We must keep the area around our houses clean and dry.  
• We should have wire mesh on the windows and doors to keep mosquitoes away.  
5. Houseflies spread many diseases. When they sit on garbage, they pick up many disease causing germs, these germs get on to food when they sit on it. Infected food is cause of stomach upsets and others diseases.

**Hot Question**

In dengu fever, platlets are reduced in blood and sometimes, patient can die.



- A.** 1. Spices add flavour to our food and increase the taste. Some of the spices are used as medicine such as turmeric.  
2. Minerals and vitamins keep our body healthy and protect us from diseases.
- B.** 1. (a); 2. (b); 3. (c); 4. (b); 5. (a)
- C.** 1. True; 2. True; 3. False; 4. False ; 5. True
- D.** 1. Pulses; 2. seeds; 3. Proteins; 4. heterotrophs; 5. digestion
- E.** 1. We need food to get energy and to grow proper.  
2. Plants can prepare their own food so they are called auto trophs.

3. Plants give us food materials, oil, wood, paper, medicines, etc.
  4. Cereals are dried seeds of some plants. They are rich sources of carbohydrate.
  5. Milk contains all essential nutrients so it is called a complete food.
- F.
1. Vegetables are the different parts of the plants. They are rich sources of vitamins and minerals which keep us away from diseases.
  2. We get milk from cows, buffaloes; eggs from hens and meat from goat, chicken, fish, etc.
  3. Carbohydrates give us energy to do work. Fats give us energy and heat.

4.

Vitamins	Sources
Vitamin A	carrot, beet root
Vitamin B	egg, potato
Vitamin C	orange, lemon, amla
Vitamin D	fish, egg, milk
Vitamin E	corn, groundnut
Vitamin K	tomato, cabbage

5. Roughage help to get rid off constipation. Water helps in digestion of food.

#### Hot Question

Fruits have fibers that help us to clean stomach and intestine. They also help us to get rid off constipation. So to eat fruits is much better than drinking juice.



## 7

## Clothes

- A.
1. Cotton balls are collected from cotton plants and dried in sunlight.
  2. Collection of fibers, spinning, weaving, dyeing and printing are the various stages of making clothes.
- B.
1. (a); 2. (c); 3. (a); 4. (c); 5. (c)
- C.
1. False; 2. True; 3. False; 4. True; 5. True
- D.
1. natural; 2. cotton; 3. synthetic; 4. cocoon; 5. sheep
- E.
1. We wear woollen clothes in winter.
  2. We use umbrella or raincoat in rain.
  3. Jute is grown in warm countries.
  4. Powerloom is machine of weaving clothes it is run on electricity.
  5. We should iron clothes to remove the wrinkles.
- F.
1. We need clothes to protect ourselves from heat, cold, dust, germs and insects.
  2. Cotton, jute, silk, wool etc. are main raw materials for making clothes.
  3. Silk thread is separated from silkworm then cloth is woven from silk thread.
  4. Fibers that are made from chemicals and petroleum, are called synthetic fibers. Nylon and Polyester are synthetic fibers.
  5. Spinning is the process of making thread from fibers.

### Hot Question

Synthetic fibers are made from petroleum products by chemical reactions so they are called artificial fibers.



## 8

### Shelter of Human Beings

- A. 1. We see pucca houses in cities.  
2. Sanitation means maintaining cleanliness by removing waste.
- B. 1. (a); 2. (b); 3. (b); 4. (b); 5. (a)
- C. 1. True; 2. False; 3. False; 4. True; 5. True
- D. 1. kuchcha; 2. fresh; 3. lawn; 4. Eskimos; 5. bones;
- E. 1. Home is a place where people live.  
2. Poor people make kuchcha house.  
3. We find pucca house in cities and towns.  
4. Stilts are wood poles which are used to raise a platform for a house.  
5. Animals pull caravan.
- F. 1. A kuchcha house is a temporary house. It is built of mud, wood and straw.  
2. A pucca house is a strong house. It is build of bricks, cement, iron, etc.  
3. There is a big problem of space in big cities so flats are constructed there.  
4. A skyscraper is a tall building and has hundreds of houses.  
5. Good ventilation allows fresh air to enter the house and stale air to go out easily. Windows and doors allow fresh air to enter the room and ventilators allow stale air to go out of the rooms.

### Hot Question

Igloos are made in cold regions where temperature is very low so igloos do not melt there.



## 9

### Air and Its Characteristics

- A. 1. Air has weight, exerts pressure and occupies space.  
2. Oxygen is necessary for burning so air is needed for burning.
- B. 1. (c); 2. (c); 3. (b); 4. (b); 5. (c)
- C. 1. True; 2. True; 3. False; 4. False; 5. True
- D. 1. wind; 2. breeze; 3. oxygen, nitrogen; 4. nitrogen; 5. burning
- E. 1. Yes we can feel air when it blows.  
2. Carbon dioxide is used by plants to make food.  
3. Plants use nitrogen gas as a fertilizer.  
4. Astronauts use walkie-talkies to talk each other.  
5. The layer of air surrounding the earth, is called atmosphere.
- F. 1. Natural resources are the things made by nature. They are very useful for us. Air, water, soil, forests, etc. are called natural resources.  
2. Air is an important natural resource because life is not possible without it. Air is used for other purposes also like to move windmill, gliders, sail boats, etc.

3. Air has many gases so it is called mixture. Nitrogen, oxygen, carbon dioxide are the main gases.
4. Take two balloons. One filled with air and other without air. Hang these balloons to the ends of a stick. End of stick bends down with air filled balloon. It shows that air has weight.
5. Sound needs a medium to travel so air is necessary to propagate sound.

#### Hot Question

There is no air on the moon so sound cannot propagate. So astronauts use walkie-talkies on the moon.



**10**

## Natural Resources

- A.
  1. The flowing water fall on the turbine and turbine rotates. Rotating turbine produce electricity.
  2. Fossil fuels are formed from the buried remains of plants and animals that lived millions of years ago.
- B. 1. (c); 2. (c); 3. (a); 4. (b); 5. (a)
- C. 1. False; 2. True; 3. False; 4. True; 5. False
- D. 1. pulp; 2. renewable; 3. hydro electricity; 4. wind; 5. coal
- E.
  1. Sun is the ultimate source of energy.
  2. Wind is used to move windmill which grind grains and draw ground water to the surface.
  3. Humus is an organic matter which is formed by the decayed bodies of animals and plants.
  4. We get wood and valuable herbs from the forests.
  5. Ores are minerals from which we get metals.
- F.
  1. The resources that do not get exhausted even after their continuous use, are called renewable resources. These resources like sun, wind, soil, water, forests, etc.
  2. The resources that cannot be made again are called non-renewable resources like petroleum, coal, metals, etc.
  3. Solar energy is used in generating power, heating, lightning, agriculture. Photoelectric cells store solar energy and convert it into electrical energy. It is also used to cook food and heat water.
  4. Coal is the fossilized remains of plants. As the dead plants decayed, they formed peat. Layers of sand and clay above the peat became rocks. Due to under high pressure and heat, peat turned into coal.
  5. Minerals are substances found naturally under the earth. We get metals from minerals. Metals are used to make vehicles, utensils, buildings and ornaments.

#### Hot Question

Fossil fuels were made from plants and animals. Plants and animals need sun heat and high pressure these remains convert into fossil fuels.



- A.** 1. Stars are the bodies of hot glowing gases. They give us light.  
2. The cold blooded animals hide themselves to protect from cold.
- B.** 1. (a); 2. (b); 3. (b); 4. (a); 5. (c)
- C.** 1. False; 2. False; 3. True; 4. False; 5. False
- D.** 1. light; 2. axis; 3. 365 $\frac{1}{4}$ ; 4. equator; 5. poles
- E.** 1. The earth spins on its own axis, this movement of the earth is called rotation.  
2. Rotation of the earth causes day and night.  
3. The axis is an imaginary line that passes through the centre of the earth and joins the North and the South poles.  
4. Earth takes an oval path around the sun. This path is called an elliptical orbit and the movement is called revolution.  
5. The earth is divided into two hemisphere the northern hemisphere and the southern hemisphere.
- F.** 1. The sun gives us heat and light. All living things get heat and energy from the sun. Animals and human beings depend on plants for their food and plants depend on the sun for making food. So the sun is the ultimate source of energy on the earth.  
2. Revolution of the earth round the sun is the cause of seasons.  
3. The earth takes an oval path around the sun, this path is called an elliptical orbit and the movement is called revolution.  
4. Weather is a condition of the atmosphere at a particular place and time. It depends upon the condition of heat, cold and wind.  
5. Climate is the regular pattern of weather condition of a particular place over a long period of time. The climate of a place affect the life of people, animals and plants. People living in hot areas wear cotton clothes and in cold regions wear woollen clothes.

**Hot Question**

If the earth does not move round the sun and on its axis then there is no change in season and day and night would not occur.

- A.** 1. Gram Panchayat is a local self government. It solve the small problems of villages.  
2. Sources of income of a gram panchayat is rent from shops, money granted from the state government.
- B.** 1. (b); 2. (a); 3. (c); 4. (c); 5. (c)
- C.** 1. False; 2. True; 3. False; 4. True; 5. False
- D.** 1. mud; 2. Srpanch; 3. Nyaya Panchayat; 4. Gram Sevak; 5. Gram Sevika
- E.** 1. A community of less than five thousand people is considered a village.

2. Gram Panchayat is a local self government the members of the Gram Sabha elect among themselves the members of the Panchayat.
3. Sarpanch is the head of Gram Panchayat.
4. The Gram sevak and Gram sevika are the workers at the village level. They are government employees.
5. Main functions of gram Panchayat are :
  - Supply of drinking water and digging wells.
  - Maintaining roads and cleanliness in the villages.
  - To keep the record of birth and death in the village.
  - It runs primary health centres in villages.

#### Hot Question

Most of the villagers are poor and illiterate so they cannot afford the expenses of courts. Gram Panchayats solve small disputes and matters of villagers.



**13**

## Municipal Committee

- A. 1. PWD construct roads.  
2. Tax paid by house owners and shopkeepers is called property tax.
- B. 1. (b); 2. (c); 3. (c); 4. (c); 5. (b)
- C. 1. False; 2. False; 3. True; 4. True; 5. False
- D. 1. committee; 2. chairman; 3. mayor; 4. PWD; 5. municipalities
- E. 1. Members of the municipal corporation elect the mayor.  
2. The term of municipal committee is 5 years.  
3. Local bodies appoint safai karamcharis.  
4. Local bodies issue birth and death certificates.  
5. A tax that is charged from all sorts of moter vehicles for using express ways/highways, is called toll tax.
- F. 1. Municipal committee is the local body of medium size town. It is formed by general election.  
2. Municipal corporation is the local body of big cities like Delhi, Kolkata, Mumbai and Chennai.  
3. Important functions of local bodies are :
  - They provide pure drinking water.
  - They appoints safai karamcharies.
  - They maintain register of birth and death issue birth and death certificate.
  - They run hospitals, orphanages, libraries.
  - They also construct and maintain parks, gardens, public toilets, recreation centre, etc.
4. Source of income of local bodies are property tex, water tax, road tax, toll tax, government grants, etc.

#### Hot Question

Safai Keramcharis clean the roads and drainage system. If they go on strike then roads will become dirty an water will not drains proper. It may cause of diseases.

- A.** 1. Teachers educate children with the help of activities.  
2. Safety patrol help to students to remain safe on the school campus and tells about school rules.
- B.** 1. (c); 2. (a); 3. (c); 4. (c); 5. (a)
- C.** 1. False; 2. True; 3. True; 4. False; 5. True
- D.** 1. clean; 2. self-confidence; 3. library; 4. Health-club; 5. healthy, fit
- E.** 1. In morning assemble, morning prayer is offered.  
2. Library, computer room, health clubs, etc. are the extra facilities in the school.  
3. A room where books are kept, is called library.  
4. Competitions develop self-confidence in children.  
5. Physical training keeps us healthy and strong.

**Hot Question**

Physical training keeps us healthy and strong. Sports and games are also include in physical training, they increase the power of concentration. So physical training is must in schools.

- A.** 1. Early man produced fire by rubbing two stones to each other.  
2. Early man make fire because fire gave him warmth and protect him from animals.
- B.** 1. (c); 2. (b); 3. (a); 4. (c); 5. (a)
- C.** 1. True; 2. False; 3. True; 4. False; 5. True
- D.** 1. stones; 2. animals; 3. lightning; 4. tasty, soft; 5. sharper
- E.** 1. Early man made fire by rubbing two stones to each other.  
2. Early man used fire to take warmth, to cook food, to make tools, and to clear forest for agriculture.  
3. Lightning was the main cause of wildfire.  
4. Fire helped to clear forests and helped to grow crops so early man came out from the forests.  
5. Fire provides the energy to drive machines and keep industries running. It provides power to move trains and ship.

**Hot Question**

Sparking is generated by rubbing of two stones and fire is produced.

- A. 1. One Day, they saw a toy flying in the air. This gave him idea to make aeroplane.  
2. In the beginning, they designed a machine with wings like a bird. They were called gliders.
- B. 1. (b); 2. (c); 3. (b); 4. (a); 5. (b)
- C. 1. False; 2. True; 3. True; 4. False; 5. True
- D. 1. Wilbur, Orville; 2. bat; 3. 1903; 4. 12; 5. Glider
- E. 1. Wright Brothers invented first aeroplane.  
2. They started a printing press and opened a bicycle shop to sell and repair bicycles.  
3. Glider is a flying machine with no power.  
4. Wright brothers invented the aircraft.  
5. The first aircraft was displayed at the National air and space museum in Washington.

**Hot Question**

Streamlined shape of an aeroplane is made to reduce air pressure.

- A. 1. Alexander Graham Bell was the pioneer of telephone.  
2. Fax machine is attached with wire to send written documents.
- B. 1. (a); 2. (b); 3. (b); 4. (c); 5. (a)
- C. 1. True; 2. False; 3. True; 4. True; 5. True
- D. 1. radio; 2. telephone; 3. mass; 4. internet; 5. Fax
- E. 1. Marconi was the pioneer of radio communication.  
2. Camera, songs, internet etc. are the other facilities in multimedia mobiles.  
3. Zee TV, Sony, Colors, Sub, Star Plus, etc.  
4. E-mail is electronic mail, it is sent through internet.  
5. Pager is used to send written text messages.
- F. 1. Mobile phones, fax, internet are some latest means of communication.  
2. Sound waves travel through air.  
3. Mobile phones can be carried any where. We can talk in moving condition also so mobile phones are more use ful than telephones.  
4. Newspaper, television, radio, etc. are the various means of mass communication.  
5. We can get any information through internet. We can send E-mail through internet so it is very useful to us.

**Hot Question**

Mobile phones are very useful because we can contact anybody at anytime, we can send messages through it. So life is not possible without mobile phones.

- A. 1. Gandhiji was born at Porbandar in Gujarat.  
2. Gandhiji fought with truth and non-violence with British Empire.
- B. 1. (c); 2. (b); 3. (c); 4. (a); 5. (b)
- C. 1. False; 2. True; 3. False; 4. True; 5. False
- D. 1. Putlibai; 2. Karamchand; 3. Kasturba; 4. South Africa; 5. Dandi March
- E. 1. Gandhiji was a great freedom fighter.  
2. Gandhiji was born on 2nd October, 1869 at Porbandar in Gujarat.  
3. He went to Britain to study law.  
4. Gandhiji started spinning to make Indian clothes and to boycott British clothes.  
5. Dandi March was the protest against salt law by Gandhiji. Thousands of people reached at sea with Gandhiji to show protest against taxes on salt.

### Hot Question

Gandhiji believed in the path of Ahinsa because he wanted to take all people in the struggle of freedom. He knew the importance of truth and non-violence.

- A. 1. JC Bose made an instrument called crescograph to check the growth of plants.  
2. JC Bose was died due to heart failure.
- B. 1. (b); 2. (b); 3. (a); 4. (c); 5. (a)
- C. 1. False; 2. True; 3. True; 4. False; 5. False
- D. 1. nature; 2. England; 3. wireless bell; 4. 1894; 5. 1917
- E. 1. Jagdish Candra Bose was born in Bengal on 30th November, 1858.  
2. Bose got his early education in Calcutta.  
3. He want to England for higher education.  
4. The main invention of JC Bose was an instrument called the crescograph to check the growth of plants.  
5. Vinvekanand gave him the title of 'Brave Son of India'.

- A. 1. The condition of woman in Nagaland was good. Their customs and traditions were more liberal and democratic.  
2. Abdul Hameed fired accurately and destroyed the leading enemy tanks.
- B. 1. (b); 2. (c); 3. (b); 4. (c); 5. (a)
- C. 1. True; 2. False; 3. True; 4. True; 5. True

D. 1. Manipur; 2. missionary; 3. tribals; 4. Dharmapur; 5. Hawildar

E. 1. Rani Gidinlieu was born in 1915 in Manipur.

2. She lived among the tribals in Manipur and Nagaland. She told people about the cruelty of British.

3. She influenced by the work of Gandhiji.

4. Jawahar Lal Nehru gave her the title 'Rani.'

5. Abdul Hameed was born at village Dharamapur in Ghazipur.

**Hot Question**

If tanks of Pakistan were not destroyed, it may cause of heavy destruction of Indian army.

**1****Interdependence in Our Environment**

- A.** 1. A group of living and non-living things interacting with each other, is called an ecosystem. It is important to maintain an ecological balance in nature.  
2. Green plants make their own foods with the help of non-living matter like sunlight, gases, soil, water, minerals, etc.
- B.** 1. (c); 2. (b); 3. (c); 4. (a); 5. (b)
- C.** 1. True; 2. True; 3. False; 4. False; 5. True
- D.** 1. non-living; 2. habitat; 3. Sun; 4. plants; 5. Scavengers
- E.** 1. A habitat is the place where a population lives. A population is a group of organisms of the same kind living in the same place. A specific type of population lives in a particular habitat.  
2. Green plants are called producers.  
3. All human belongs and animals are called consumers because they depend on plants for their food directly or indirectly.  
4. Some animals help in keeping the environment clean by eating flesh of dead animals. Such type of animals are called scavengers.  
5. Wildlife sanctuaries and national parks are set up to protect wildlife.
- F.** 1. A group of living and non-living things interacting with each other, is called an ecosystem.  
2. The living part of an ecosystem is called the food chain. All living things need energy to survive.  
3. Sun → Grass → Insects → Frog → Snake  
4. Decomposers are organisms that feed on dead plants and animals and reduce their remains to minerals. They break down (decompose) the dead parts of the plants into minerals which get mixed in soil. These minerals form part of food for plants which they take through their roots.  
5. A balance between animals and plants is very necessary for environment. When animals and plants live together in balance for a long time, ecosystem becomes stable. When there is a disturbance, the plants and animals can die.

**Hot Question**

Carnivorous animals eat deer, zebra and other small herbivorous animals if they die then carnivorous animals cannot get their food and start to die.

**2****Natural Resources**

- A.** 1. Soil contains water, minerals and air.  
2. We get petrol, diesel, kerosene, lubricant, etc. from petroleum.
- B.** 1. (c); 2. (b); 3. (b); 4. (c); 5. (a)



- C.** 1. False; 2. False; 3. True; 4. False; 5. True
- D.** 1. plant; 2. humus; 3. Granite; 4. Coal; 5. Coal
- E.** 1. Organic part of the soil is called humus, which is formed by decaying parts of plants and animals.
2. Minerals that contain metals are called ores.
3. Fossil fuels are the lead remains of plants and animals that were buried under the earth millions of year ago.
4. Natural gas is lighter than air. Natural gas is mostly made up of a gas called methane.
5. We can use solar energy in solar cooker to cook food, solar heater to heat water, solar cells to convert sunlight into electricity.
- F.** 1. Water, air, soil, forest, wildlife and minerals are natural resources. Natural resources are valuable gifts of nature for us. They support life on earth.
2. Soil is formed from rocks and decaying plants and animals by the action of water, wind and sunlight. The heating of the sun followed by the cooling at night causes rocks to crack. Rain water fills these cracks and makes the cracks bigger and the rock finally breaks into smaller pieces. Blowing of the wind carries away these pieces and again breaks them down into tiny particles. These fine particles of rocks are called soil.
3. Sedimentary rocks are formed underwater. Layers of mud, sand or sea shells are built up over a long time. The layers get squeezed and stuck together and make new rocks. Sandstone, gypsum and limestone are sedimentary rocks.
4. Ores contain several impurities. They are mixed, refined and then metal is extracted. This process of mining and refining ores is called metallurgy.
5. Petroleum is formed from the remains of land creatures and sea creatures. It is called rock oil because it is trapped between the rocks deep inside the earth.

### Hot Question

When all stock of fossil fuels are finished then we have no source of energy to move vehicles. So we should conserve fossil fuels.



## 3

## Natural Calamities

- A.** 1. A sudden shaking or trembling of the earth is called earthquake. This shaking or trembling occurs in specific zones. These zones are called faults.
2. Wells, lakes and streams begin to dry up. The land is dry and plants cannot be grown on it. Animals and human beings suffer and even die from thirst and dehydration.
- B.** 1. (b); 2. (c); 3. (b); 4. (c); 5. (a)
- C.** 1. True; 2. True; 3. False; 4. True; 5. False
- D.** 1. faults; 2. seismograph; 3. sea; 4. Japanese; 5. rainy

- E. 1. The intensity of earthquake is measured by an instrument called seismograph. Earthquake is measured on Richter scale.  
 2. Speed of cyclone is about 50 km/hr.  
 3. Indonesia, Sri Lanka, Thailand and India.  
 4. Rivers overflow and water enters in many residential areas.  
 5. Land becomes dry, plants do not grow, animals do not find food in drought.
- F. 1. Earthquakes, cyclones, tsunami, floods, drought, etc. are some of the common natural calamities. They cause great damage to property and life.  
 2. An earthquake is caused by the release of the stresses that accumulate at the boundaries of the moving plates. This movement of plates disturbs the rocks in the interior of the earth. This disturbance in rocks produces the shaking or trembling of the earth.  
 3. Cyclones are violent storms that have high winds rotating around a calm centre. This centre moves with a speed of about 50 km/hr.  
 4. A tsunami is a series of huge waves that travel in all directions, much like the ripples caused when we throw a stone into a pond. Within minutes of the earthquake, the tsunami travels out to the deep ocean and towards the nearby coast.  
 5. Heavy rainfall raises the level of water in rivers and it overflows to the land. The great rush of water then sweeps through many residential areas.

#### Hot Question

Heavy rainfall and overflows of rivers are the main cause of flood.



## 4

## Flowers and Fruits

- A. 1. Sepals, petals, stamen and pistil.  
 2. When animals eat fruits then only juicy part is digested and seeds pass through the animal's digestive system.
- B. 1. (c); 2. (a); 3. (b); 4. (c); 5. (b)
- C. 1. False; 2. True; 3. False; 4. False; 5. True
- D. 1. Stamen; 2. style; 3. ripened ovary; 4. seed coat; 5. seeds
- E. 1. The style leads the pollen down to the ovary that contains the ovules. The ovary forms the fruit and ovules form the seeds.  
 2. The pollen grains enter the ovary through the style. They get fused here or join up with the ovules to form seeds.  
 3. Cotyledons store food for the baby plant before the baby plant starts making its own food.  
 4. Wind, water, animals, birds, etc. are the agents of dispersal.  
 5. When a seed starts to grow into a baby plant, it is called germination. A seed needs air, moisture (water) and warmth for germination.
- F. 1. Sepals help to protect the bud before it opens. Petals attracts butterflies and bees.

2. The process of taking pollen from one flower to another is called pollination.
3. A large number of seeds are produced in a plant. When fruits ripen, they often burst and scatter their seeds. Sometimes, many seeds fall near the main plant, they cannot grow well because they do not get proper sunlight, water and air. So scattering of seeds is necessary for proper germination.
4. Water carries seeds of some plants like lily, lotus, coconut, palm. In this way, water helps in dispersal.
5. Some fruits are very colourful and tasty like mango, apple, orange, papaya, etc. When animals or birds eat them, then only juicy part is digested and seeds pass through the animal's digestive system.

### Hot Question

Flowers are the reproductive organ of the plants. They attract insects for pollination. If there is no flower on plant, reproduction of plants will stop.



## 5

## How Animals Find Their Food?

- A.
  1. Ants communicate with each other with the help of antennae.
  2. A giraffe uses its neck to pluck leaves from tall trees.
- B. 1. (c); 2. (b); 3. (c); 4. (a); 5. (b)
- C. 1. True; 2. False; 3. False; 4. True; 5. True
- D. 1. antennae; 2. 35000; 3. smell; 4. claws; 5. nocturnal
- E.
  1. Antennae are very useful organs of an ant, therefore, they keep them clean with the help of combed legs.
  2. In one minute, it can put its tongue into the mound for 160 times.
  3. Bats are frightful creature of night.
  4. Fish has a special organ called the lateral line that helps it to detect the nearness of other organisms before it can see that organism.
  5. An elephant uses its trunk to break the plant material and put it in to the mouth.
- F.
  1. Ants can quickly detect their food with the help of their antennae.
  2. The tongue of an ant eater is sticky and two feet long so it helps to catch its prey.
  3. Eagles are known for their powerful vision, aerial skill and courage. These features help the eagles in hunting their prey.
  4. Tigers are perfect predators. They have tremendous power and speed to catch their prey. Tigers have a perfect vision that helps them to accurately judge the distance of the prey.
  5. They help in pollination of plants. They are natural enemies of night flying insects and pests. Their dropping's produce a nitrogen rich fertilizer known as guano.

### Hot Question

The shark has a powerful sense of smell and it can detect odours of other animals even

hundreds of metres away. Sharks can see better in low light conditions and are considered the most efficient hunters in the sea.



## 6

## Wildlife

- A.** 1. Forests are called store house of wildlife because different types of trees, and animals are found here.  
2. Hunting and poaching of animals are threats to their extinction so these are banned in protected area.
- B.** 1. (c); 2. (b); 3. (c); 4. (a); 5. (b)
- C.** 1. False; 2. True; 3. True; 4. True; 5. True
- D.** 1. wild animals; 2. environment; 3. extinct; 4. endangered; 5. Jim Corbett
- E.** 1. There are certain animals species that do not exist anymore on the earth. Such animals are called extinct animals.  
2. Poaching means the killing of animals for economic benefits like the tusks of elephant, skin of animals, etc.  
3. National parks are the small covered areas in the forests or near rivers or lakes. Hunting of animals are not allowed in these areas.  
4. Darraha, Dachigam, Hazaribagh, Periyar and Manas.  
5. Bio-sphere reserves are very large and multipurpose areas that provides protection to plants and animals. They also educate the people about the protection of animals and plants.
- F.** 1. Wildlife is related to all those plants and animals and other organisms that can not be domesticated.  
2. Some animals are on the verge of extinction. They are called the endangered animals.  
3. Deforestation and pollution are some of the important reasons for the endangerment of animals.  
4. Bandipur, Nagerhole, Tadoba, Borivilli and Sunderban are some national parks. Gandhi Sagar, Mudu Malai, Waynad, Simlipal and Tungbhadra are some wildlife sanctuaries.  
5. National parks and wildlife sancturies are made for protection of wildlife. Killing of animals in banned in these areas.

### Hot Question

Some species are at the verge of extinction called endangered animals. If these animals are not protected properly, they would be extinct.



## 7

## The Cells, Basic Unit of Body

- A.** 1. Nutrients are the fuel for cells.  
2. Hair are made of dead cells so we do not feel pain on cutting hair.

- B.** 1. (c); 2. (b); 3. (a); 4. (b); 5. (b)
- C.** 1. False; 2. True; 3. True; 4. False; 5. True
- D.** 1. cells; 2. 30; 3. 220; 4. dead; 5. nutrients
- E.** 1. A cell is a building block of our body as brick for a building.  
 2. Energy and heat are released inside the cells. The heat from the cells keeps a steady body temperature.  
 3. Eyes are used to see objects.  
 4. Our lungs help us to breathe.  
 5. Our muscle cells live longer (for few years).
- F.** 1. Cells keep on splitting in our body. As some cells die, others divide to make new ones to replace the dead cells.  
 2. Cells that perform the same function form a tissue. A group of muscle cells makes a muscle tissue.  
 3. An organ is a group of tissues that do a certain job for our body.  
 4. Two or more organs that are doing a part of the same task form a system.

### Hot Question

If old cells will not be replaced by new cells then growth of our body would stop.



## 8

## Skeleton And Muscular Systems

- A.** 1. Back bone protects the delicate spinal cord. The spine holds our neck and head up.  
 2. In ball and socket joint, one end of some bone is round like a ball. It fits into a hollow part (socket) of the other bone.
- B.** 1. (b); 2. (a); 3. (b); 4. (a); 5. (c)
- C.** 1. True; 2. False; 3. True; 4. False; 5. False
- D.** 1. skeleton; 2. 206; 3. femur; 4. calcium; 5. 33
- E.** 1. The skull protects the brain inside it. The skull consists of 8 flat bones interlocked together.  
 2. The skull is attached to the backbone (spine). It consists of 33 bones. These are called vertebrae.  
 3. The ribs are thin, curved bones that form a cage around the heart and lungs. There are 12 pairs of ribs.  
 4. Shoulder girdles consist of a pair of collar bones.  
 5. The hinge joint works like the hinges in a door. Hinge joint help the body parts to move in one direction like joint of elbows.
- F.** 1. A group of tissues and organs make an organ system.  
 2. The framework of our body is made up of bones. This frame of bones give shape to our body, this frame is called skeleton system.

3. There are different types of joints-ball and socket joint, hinge joint, pivot joint, gliding joint, immovable joint.
4. Muscles help in the movement of bones. Our body has different types of 650 muscles, this system is called muscular system.
5. Voluntary muscles are those muscles which work under our control and involuntary muscles are those muscles which work automatically like muscles of heart.

### Hot Question

A new born baby has small bones which are joined to form big bones so a new born baby has 305 bones while an adult person has only 206 bones.



## 9

## More About Organ Systems

- A.
  1. Brain controls all the activities of the body so it called engine of the body.
  2. Breathing is a physical process and respiration is a chemical process.
- B. 1. (c); 2. (b); 3. (c); 4. (a); 5. (b)
- C. 1. False; 2. False; 3. False; 4. True; 5. False
- D. 1. brain, spinal cord, nerves; 2. spinal cord; 3. Ventricle; 4. Small; 5. 200 litre
- E.
  1. Heart, blood vessels and blood are the main parts of circulatory system.
  2. The heart is divided into four chambers. Two upper chambers are called atrium and two lower chambers are called ventricle.
  3. The blood consists Red Blood Cells (RBC's), White Blood Cells (WBC's), haemoglobin, platlets, etc.
  4. The process by which the gases enter and leave the blood stream and lung cells is called diffusion.
  5. In the stomach, more digestive juices are released to breakdown the food.
- F.
  1. Nervous system controls and directs the functions of all the systems of our body. Brain, spinal cord and nerves are the main parts of the nervous system.
  2. The lips, tongue and fingertips are the most sensitive parts because there are more receptors located here.
  3. Respiration is breathing air in (inhaling) and out (exhaling).
  4. The small intestine is a long coiled tube. The liver and the pancreas release more digestive juices and reach into the small intestine. The action of all these juices break down the food into its simplest form. The walls of the intestine have blood vessels that absorb the digested food.
  5. The excretory system works to clean our blood and eliminate the waste products of our cells. A pair of kidneys, ureter, bladder and urethra are the main organs of this system.

### Hot Question

If our kidneys stop to work then wastes of our body can not be removed and toxic elements deposit in our body. This causes illness.



- A.** 1. Excess fat can cause of obesity and different types of diseases.  
2. Abdomen swells, child loses appetite, the growth of child stops and liver is also affected.
- B.** 1. (b); 2. (c); 3. (b); 4. (a); 5. (b)
- C.** 1. False; 2. True; 3. True; 4. False; 5. False
- D.** 1. body-building; 2. Nutrients; 3. anaemia; 4. rickets; 5. nutrients
- E.** 1. Carbohydrates and fats are energy-giving nutrients.  
2. Proteins are body-building nutrients and help us to grow.  
3. Vitamins and minerals are called protective nutrients. They help us to keep fit and healthy.  
4. Disease caused by lack of protein is called kwashiorkor.  
5. A balanced diet consists of food that has all the essential and adequate nutrients necessary for growth, development and good health.
- F.** 1. Nutrients are the fuel for our body. They give us energy, help to grow proper and keep us away from diseases.  
2. Calcium and phosphorus are very necessary minerals for bones and teeth. Deficiency of these minerals makes bones and teeth weak.  
3. Roughage helps to clean the digestive system. They help the food to pass through the stomach.  
4. Diseases that are caused by deficiency of nutrients are called deficiency diseases.  
5. Malnutrition means lack of nutrients. The human body needs a certain amount of carbohydrates and proteins. The lack of these nutrients in our food over a long period affects our health. Malnutrition specially affects children.

### Hot Question

Sunlight contains vitamin D that is necessary for our body.

- A.** 1. Microbes are able to reproduce or multiply themselves so they grow fastly.  
2. Vaccination protects us from diseases, it gives the body the power to fight against disease causing germs.
- B.** 1. (c); 2. (b); 3. (c); 4. (a); 5. (c)
- C.** 1. False; 2. True; 3. True; 4. True; 5. False
- D.** 1. Yeasts; 2. germs; 3. bacteria; 4. Garbage; 5. immunity
- E.** 1. Microbes are tiny living things and cannot be seen by naked eyes.



2. Microbes can also be harmful when they cause infections. Harmful microbes are called germs.
  3. Viruses are smaller than the bacteria. Although they remain in or outside the living matter, they become highly active and multiply vigorously once they enter the living body. Chicken-pox, measles, dengue-fever, polio, influenza, rabies are caused by viruses.
  4. The disease causing microbes (germs) are transmitted from a patient to a healthy person by different ways. Such type of diseases are called communicable diseases.
  5. The natural ability of an organism to prevent or resist entry of germs is called immunity.
- F.
1. Yeasts are microbes that bakers use to make bread, cake, pizza, etc. Yeasts grow faster in curd, maida, etc.
  2. Protozoa are single-celled organisms that live in water. When protozoa enter our body, they form a protective covering called cyst. Many protozoa live inside our body. They cause digestive disorders in humans. Malaria and dysentery are caused by protozoa.
  3. A person who has a cold may sneeze or cough. When a sick person coughs, sneezes, thousands of germs spread in the air. When a healthy person comes in contact with these germs, he can get the disease.
  4. When food and water are kept open for a long time, germs grow in it. Flies and insects sit on food and make it poisonous. After eating contaminated food, the germs in the food multiply in the stomach.
  5. The germs of diseases such as malaria, dengue are spread through mosquito bite. Therefore these are called carriers of diseases.

### Hot Question

Acids produced by stomach kill the microbes and help in digestion of food.



- A.
  1. Primary healthcare means to give proper treatment of diseases and injuries, i.e. giving medicines. Proper care of mothers and new born babies also available here.
  2. ICU means Intensive Care Unit. All modern facilities are available in ICU.
- B. 1. (a); 2. (b); 3. (c); 4. (b)
- C. 1. False; 2. True; 3. True; 4. True
- D. 1. prescribing, administration; 2. safe water, sanitation; 3. many; 4. dispensaries
- E.
  1. Healthcare refers to the medical services by specialists such as physicians, surgeons, nurses, midwives, lab technicians, etc.
  2. Primary health centres are run by the government and mostly found in rural areas or villages.

3. Medical van provides health services to the people in village and towns.
4. Big private hospitals have many modern facilities such as the latest machines and special A.C rooms, intensive care unit (ICU), etc. There are big modern, well equipped operation theatres (OT) in such type of hospitals. Doctors are well qualified and there are number of doctors of one disease.
5. Dispensaries means dispense medicines prescribed by a doctor working in the dispensary. Dispensaries can be found in almost all villages, towns and cities. They do not have facilities for conducting operations. Dispensaries are run by the government and private persons.

### Hot Question

Poor people take the facilities provided by government Health Centres because they do not have enough money to spend in big hospitals.



**13**

## Pollution

- A. 1. Pollution is the cause of many diseases like skin allergy, jaundice, cholera, etc.  
2. Throwing garbage, use of pesticides and fertilizers are the main causes of soil pollution.
- B. 1. (c); 2. (a); 3. (c); 4. (b); 5. (a)
- C. 1. False; 2. True; 3. True; 4. True; 5. False
- D. 1. sewage; 2. Polluted water; 3. acid; 4. Roots; 5. deafness, headache
- E. 1. Pollution means making air, water, soil, etc. dirty.  
2. Mixing of impurities and unwanted particles in the water is called water pollution.  
3. Mixing of smoke, dust in the air, is called air pollution.  
4. Throwing garbage mixing unwanted substances and used of pesticides and fertilizers are the main causes of soil pollution.  
5. Noise pollution can cause deafness, headache and high blood pressure.
- F. 1. Smoke emitted from factories, vehicles, industrial wastes, domestic wastes are the various causes of pollution.  
2. Prevention of water Pollution :  
(a) We should not dump garbage or industrial wastes in water bodies.  
(b) Sewage from industries should be properly treated before releasing into water bodies.  
(c) We should not wash clothes near water bodies.  
(d) Animals should be banned to bathe in water bodies.  
3. Coal and fossil fuels contain sulphur particles. When these are burned in air, they combine with oxygen and form sulphur dioxide gas. This gas mixes with water vapours present in air and forms acid rain.  
4. Prevention of Soil Pollution :  
(a) Use of fertilizers and pesticides should be minimized.

- (b) Dumping of garbage should be proper.
  - (c) Garbage should not be burnt on the land.
  - (d) Unnecessary cutting of trees should be banned.
5. The noise of horns, loudspeakers, factory– machines, running vehicles, etc. are the various causes of noise pollution.

### Hot Question

If continuous use of fossil fuels does not stop they will be exhaust completely and they will not remain for future use.



**14**

## Sources of Energy

- A.**
1. Solar energy is also used in solar panel, solar water heater, solar cooker, etc. Solar energy is stored in solar cells which is used to light street lamps, etc.
  2. A lot of heat is liberated in a nuclear reactor, this heat is used to boil water and produce steam which turns the turbines of electric generator and then electricity is produced.
- B.** 1. (c); 2. (a); 3. (c); 4. (a); 5. (b)
- C.** 1. True; 2. False; 3. True; 4. True; 5. False
- D.** 1. Energy; 2. make food; 3. wind; 4. hydro electricity; 5. gobar gas
- E.**
1. Energy is the capacity to do work.
  2. Fossil fuels are the dead remains of plants and animals.
  3. Wind energy is used in windmills to pump out underground water and to grind food grains. Wind mill is also used to generate electricity.
  4. Biogas is a very good source of energy. It is produced by cattle dung and plant's waste. It is used for cooking, heating, lightning purposes.
  5. Crude oil is found deep below the surface of the earth. Crude oil is separated into various components like petrol, diesel, kerosene, lubricant, LPG, etc.
- F.**
1. The sources of energy that do not exhaust after using again and again, are called renewable sources of energy. Solar energy, wind energy, water energy, geothermal energy, biogas, etc. are the renewable sources of energy.
  2. The turbines in hydro-electric power stations are run by fast moving water. The rotation of a turbine produces electricity in the generators.
  3. The sources of energy that are exhausted and cannot be used again, are called non-renewable sources of energy such as coal, petroleum products, natural gas, nuclear energy, etc.
  4. Nuclear energy is also called atomic energy. It is made from Uranium or radium, used in an atomic power station.
  5. There is a limited stock of non-renewable sources of energy so we should conserve energy.

### Hot Question

Fossil fuels are formed by plants and animals which were buried millions years ago. Plants and animals get their energy from sun so fossil fuels are related to sun indirectly.



15

## The Physical Features of India

- A. 1. Snow deposited on the mountains, melt and cause of flow of water in rivers throughout the river.  
2. Shimla, Mussoories, Kulu Manali, Kashmir, etc.
- B. 1. (b); 2. (c); 3. (c); 4. (a); 5. (c)
- C. 1. False; 2. True; 3. False; 4. True; 5. True
- D. 1. triangular; 2. Rajasthan; 3. glacier; 4. perennial; 5. fertile
- E. 1. The plain is joined to the table top land known as Deccan Plateau bounded by Western and Eastern Ghats.  
2. A landmass bounded on three sides by sea or ocean is called a peninsula.  
3. (a) The Great Himalayas; (b) the Himachal; (c) Shivaliks  
4. A huge mass of frozen ice is known as glacier.  
5. Shimla, Kashmir, Kulu Manali, Mussoorie.
- F. 1. The most important physical feature of the landmass of India is its triangular shape. It has many mountains and hill ranges that lie with the border of North India. On the west, it is the Western Ghat. Both of these are hill ranges.  
2. The Himalaya is a combination of two words. Him means snow and alaya means abode. Indeed, all the high mountain peaks of Himalayas remain covered with snow throughout the year.  
3. The eastern ranges of Himalayas are called Purvanchal. The Patkai Bum, Naga hills, Garo hills and Lushai hills run along India's border with Bangladesh and Myanmar.  
4. Plains along the coast, are called coastal plains. There are two coastal plains in India : East coast plain and west coast plains.

### Hot Question

Desert lies to the west of Indo-Gangetic plain. It receives very little rainfall and is therefore dry and sandy.



16

## National Symbols

- A. 1. National flag is hoisted on national festivals.  
2. We cannot see the fourth lion because it is on back side of front lion.
- B. 1. (c); 2. (b); 3. (c); 4. (b); 5. (c)
- C. 1. False; 2. False; 3. True; 4. True; 5. False

- D.** 1. tiranga; 2. Bankim Chandra Chatterjee; 3. anthem; 4. tiger; 5. peacock
- E.** 1. Every free country has some symbols for its recognition and to bind its people together. These symbols inspire nationalistic feelings in the countrymen.
2. The saffron colour stands for sacrifice.  
The white colour stands for peace and truth.  
The green colour stands for life, fertility and prosperity.
3. Wheel suggests and inspires us to move forward and lead the nation to progress and prosperity.
4. Every country has its national anthem. Jana-Gana-Mana is our national anthem. Our national anthem was written by the famous poet Rabindra Nath Tagore.
5. The national emblem of India has been adopted from the Sarnath lion, capital of Ashoka. It was adopted by government on 26th January, 1950 at Republic day. The emblem has four lions facing in four different directions. There is a horse standing on the left side of the wheel and a bull on its right side.

### Hot Question

Our constitution was applied on 26th January because before Independence, this day was celebrated as Independence day.



17

## Historical Monuments

- A.** 1. Generally they refer to the history and help us to know about our ancient culture.  
2. Sanchi Stupa is very significant historical monument because it shows a fine example of art and architecture of ancient time.
- B.** 1. (c); 2. (b); 3. (b); 4. (c); 5. (a)
- C.** 1. True; 2. True; 3. False; 4. False; 5. True
- D.** 1. Shahjahan; 2. Shahjahan; 3. Red Fort; 4. 72m; 5. Konark
- E.** 1. Taj Mahal, Red Fort, Qutub Minar, Sun Temple.  
2. This tomb was built by the Humanyu's widow Hamida Banu Begum.  
3. Ramayana and Mahabharata.  
4. The temple takes form of a chariot of the Sun God. It is decorated with beautiful stone carvings.  
5. The Golden Temple is very famous religious place of the Sikhs. It is situated at Amritsar. It is the main gurudwara for the Sikhs of the whole world.
- F.** 1. Historical monuments include the buildings that were constructed in ancient and medieval time. Such buildings include temple, mosque, church, gurudwara, palace, fort, pillars and many other residential houses of important persons.  
2. It is a 72 metre high minaret which has four storeys. Its first three storeys are made up of Red sandstone but the fourth storey is made up of marble and Red sandstone. Its

diameter at the base is 15 metres and 2 metres at the top. There are inscriptions of the Quran on the walls of the Qutub Minar.

3. The Kailash temple at Elora is a great monument of its kind. It has been carved out of a single rock in mountain. The temple exhibits the different aspects of myths and beliefs related to Lord Shiva.
4. It is a place where Gautama Buddha attained enlightenment. It is a very famous holy place for Buddhist.
5.
  - a. Do not write anything on the walls.
  - b. Do not throw garbage anywhere while visiting them.
  - c. Keep these monuments neat and clean.
  - d. Do not remove stones or bricks from them.
  - e. Do not allow birds or animals to make their home in such buildings.

### Hot Question

Historical Monuments are our historical heritage. They are important sources of history so we should preserve historical monuments.



18

## The Pride of Our Nation

- A.
  1. Sushruta did many operations like cataract, hernia, lithotomy, etc.
  2. Raja Ram Mohan Roy was a great social reformer. He was against some of the religious rituals like child marriage, sati pratha and casteism.
- B.
  1. (b); 2. (c); 3. (b); 4. (a); 5. (b)
- C.
  1. False; 2. True; 3. True
- D.
  1. Dhanvantari; 2. plastic surgery; 3. Charaka Samhita; 4. Aryabhatta; 5. 1930.
- E.
  1. 'Ayu' means 'life' and 'Veda' means 'knowledge'. This system provides knowledge about life.
  2. Aryabhatta was a great mathematician and astronomer of the ancient India. He knew that the solar and lunar eclipses occur due to the shadows cast by the earth and the moon.
  3. Raman made significant contributions to the field of vibration and sound, musical instruments, magnetism and the scattering of light.
  4. He contributed in establishment of Tata Institute of Fundamental Research and Bhabha Atomic Research Centre. He contributed his expert guidance in building the atomic reactors, Apsara, Circus and Jerlina.
- F.
  1. Sushruta is called the father of Indian surgery. He was the first person to study human anatomy.
  2. Charaka discovered that a human body has 360 bones, including the teeth. He claimed that the heart was connected to the entire body through 13 main channels.

Charaka knew the fundamentals of genetics. He knew the factors determining the sex of a child. He proved that a genetic defect in a child like blindness, was not due to any defect in the mother or the father.

3. He was responsible for development of Agni and Prithvi missiles. He came to be called India's missile-man.
4. Raja Ram Mohan Roy was a great reformer, he was against social evils like child marriage, sati pratha and casteism.

Swami Dayanand Saraswati condemned many evil social practices.

Mother Teresa served the sick and the poor people.

#### **Hot Question**

India did not progress very much in science due to lack of modern facilities.