

## SCIENCE NATURE-1

### 1. Living and Non-living Things

A. 1. Right 2. Wrong 3. Wrong 4. Right 5. Right

B. 1. a 2. b 3. c 4. b 5. a

C. 1. Living things ..... animals.  
2. Non-living things ..... table. 3. We do ..... own. 4. Mother ..... baby.

### 2. Green World of Plants

A. 1. Right 2. Right 3. Wrong 4. Wrong 5. Right

B. 1. Neem 2. Shrubs 3. Climbers 4. Creepers

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

D. 1. Big, tall ..... mango. 2. Mint ..... Sunflower. 3. The stem of ..... creepers.

E. Do yourself

### 3. Food from Plants

A. 1. Wrong 2. Right 3. Right 4. Wrong 5. Right

B. 1. a 2. c 3. c 4. c 5. b

C. 1. Roots, stems, leaves and flowers.

2. Fleshy and juicy part of a plant. 3. Cereals and pulses. 4. Tea and coffee are beverages.

5. Red chillies, cumin seeds and clove.

### 4. Wonderful Animals

A. 1. big 2. milk 3. zoo 4. penguin 5. aquatic animal

B. 1. c 2. a 3. c 4. b 5. b

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

### 5. Animals : Food and Shelter

A. 1. Right 2. Right 3. Right 4. Wrong 5. Right

B. 1. a 2. b 3. b 4. c 5. a

C. 1. Plant-eaters eat grass and other green plants while flesh-eaters hunt other animals and eat their flesh. 2. Frog, spider and lizard.

3. Elephants, monkeys and rabbits. 4. Birds

5. Dog and cow.

### 6. Our Body

A. 1. two 2. two 3. ten 4. two 5. two 6. one 7. one 8. two

B. 1. c 2. a 3. a 4. a 5. b

C. 1. Many 2. Writing and eating 3. Running and skipping 4. Eyes, nose ..... sense

organs. 5. Skin

### 7. We Need Food

A. 1. fruits, vegetables and cereals 2. milk, eggs and meat 3. butter, ghee and curd

4. breakfast, lunch and dinner

B. 1. b 2. c 3. a 4. c 5. a

C. 1. To live and grow. 2. Plants and animals.

3. Food items that are made from milk.

4. Foods that help ..... healthy foods.

5. Breakfast, lunch and dinner.

### 8. Housing and Clothing

A. 1. houseboats 2. rooms 3. bedroom

4. clothes 5. cotton

B. 1. c 2. a 3. c 4. a 5. c

C. 1. To live in. 2. Permanent houses made are of bricks, cement and steel while temporary houses are made of mud, thatch and dry grass. 3. Houses that are made of cloth. 4. We wear cotton clothes in summer season and woollen clothes in winters. 5. Special clothes wear by some people at work.

### 9. Keeping Fit

A. 1. Wrong 2. Wrong 3. Wrong 4. Right 5. Right

B. 1. b 2. c 3. a 4. c 5. b

C. Eat healthy food ..... surroundings clean. 2. Makes us feel ..... of energy. 3. Exercising and playing outdoor games. 4. By keeping ourselves dust and germs free. 5. Throw trash in trashbin and cover the mouth while sneezing.

### 10. Stay Safe

A. 1. Safety 2. zebra crossing 3. road 4. Green 5. heater

B. 1. c 2. a 3. a 4. c 5. c

C. 1. Staying away from harm. 2. Always walk on the footpath and cross the road at the zebra crossing. 3. Do not put ..... moving bus and do not board ..... moving bus. 4. Red light tells ..... to go. 5. Do not play ..... blades and do not play with ..... switches.

### 11. We Need Air

A. 1. Air 2. breathe 3. move 4. wind 5. helps

B. 1. a 2. b 3. b 4. c 5. c

C. 1. When it moves. 2. The air takes up the space inside the balloon. 3. Moving air is called wind. 4. Air occupies space and has weight. 5. Air helps us to breathe and to burn things.

**12. We Need Water**

A. 1. Wrong 2. Right 3. Wrong 4. Right 5. Right

B. 1. a 2. b 3. c 4. b 5. a

C. 1. Plants need water to grow. 2. For drinking and bathing. 3. Rain 4. A large water body that flows towards sea or ocean. 5. Pot, bucket, bottle and tank.

**13. Weather and Seasons**

A. 1. sun 2. summer season 3. winter season

4. monsoon 5. fall

B. 1. b 2. c 3. b 4. c 5. a

C. 1. There are five seasons in a year. 2. Weather is the condition of air at a particular time or place. 3. We wear woollen clothes to keep ourselves warm. 4. The days of spring and autumn seasons are very pleasant. 5. Raincoats and umbrella

**14. Up in the Sky**

A. 1. Wrong 2. Wrong 3. Wrong 4. Right 5. Right

B. 1. b 2. c 3. c 4. c 5. c

C. 1. The space above the Earth. 2. The sun. 3. No. 4. People who travel in space. 5. Because they are very very far from us.

## SCIENCE NATURE-2

### 1. Types of Plants

- A. 1. Right 2. Wrong 3. Right 4. Wrong 5. Wrong
- B. 1. b 2. a 3. c 4. a 5. b
- C. 1. In the soil 2. We can classify the plants on the basis of their shape and size. 3. In most trees the trunk bears many small stems called branches. 4. **Shrubs:** a. Shrubs smaller than trees. b. Shrubs have a thin and hard stem. **Herbs:** a. The very small plants are called herbs. b. Herbs have a soft stem.
5. **Climbers:** a. Climbers cannot erect stand on their own. b. They need support of another plant or sticks to stand.
- Creepers:** a. Creepers crawl along the ground. b. Creepers have weak stem.

### 2. Uses of Plants

- A. 1. Right 2. Wrong 3. Right 4. Wrong 5. Right
- B. 1. c 2. a 3. b 4. a 5. c
- C. 1. Plants give us vegetables, fruits, cereals and pulses. Plants also give us coffee, tea, sugar, oil and spices. 2. Onion, carrot and radish 3. Pulses are very important for the growth of children. Children should eat plenty of pulses in their meals. 4. a. Tulsi is used for treatment of cold and cough. b. Neem leaves and its bark are used for skin diseases. c. Cinchona leaves are used for curing malaria. 5. Three uses of plants are: a. Flowers of some plants are used for decoration. b. Some plants are used as hedges. c. Dried wood of trees is used as fuel.

### 3. Animals Help Us

- A. 1. Right 2. Right 3. Wrong 4. Right 5. Right
- B. 1. a 2. c 3. c 4. b 5. a
- C. 1. lion 2. cow 3. oil 4. tie 5. sheep
- D. 1. Animals that we ..... animals.  
2. Cows, buffaloes and goats. 3. Silkworm  
4. Shoes, jackets and belts. 5. Donkey, horse, ox and elephant; because they are used to carry ..... our fields.
- E. 1. Bread 2. Butter 3. Cheese 4. Curd 5. Ghee

### 4. Wild Animals

- A. 1. Rabbit 2. Monkey 3. Cow 4. Jackal 5. Dodo
- B. 1. b 2. a 3. b 4. c 5. a
- C. 1. Animals that live in forests. 2. Elephant, giraffe and zebra. 3. In nest 4. Herbivores eat grass, leaves and fruits while carnivores eat the flesh of other animals. 5. Human beings ..... other things.
- D. 1. Pride 2. Herd 3. Colony 4. Troop 5. Flock 6. School

### 5. Bones and Muscles

- A. 1. Wrong 2. Right 3. Wrong 4. Right 5. Wrong
- B. 1. b 2. c 3. a 4. c 5. b
- C. 1. The bones together ..... called the skeleton. 2. The skull 3. To bend and twist. 4. To allow us to walk, run and play. 5. The position ..... called posture.

### 6. Healthy Food

- A. 1. food 2. protective 3. first 4. slowly 5. uncovered
- B. 1. c 2. a 3. b 4. a 5. b
- C. 1. To live and grow. 2. Rice, sugar, butter, potato, etc. 3. It helps us to ..... from our body. 4. Some people ..... called vegetarians and some ..... non-vegetarians. 5. (a) Wash ..... meals. (b) Always eat ..... food.

### 7. Housing and Clothing

- A. 1. Pucca 2. flats 3. tents 4. summer 5. Wool
- B. 1. a 2. c 3. b 4. a 5. c
- C. 1. We need a ..... unwanted animals. 2. Pucca house is made of bricks ..... steel while kutcha house is made of mud. 3. Houses that float on water. 4. Cotton clothes; because they keep our body ..... sweat. 5. From sheep.
- D. 1. Igloo 2. Bricks 3. Raincoat 4. Tent 5. Carvan

### 8. Safety

- A. 1. Right 2. Right 3. Wrong 4. Wrong 5. Wrong
- B. 1. a 2. b 3. a 4. c 5. a

- C. 1. Our carelessness 2. On the pavement.  
3. Do not lean out ..... moving vehicle.  
4. Do not play ..... slide or see-saw.  
5. Swimming tube.

#### 9. Air

- A. 1. feel 2. air 3. Clean 4. storm 5. dry  
B. 1. b 2. c 3. a 4. b 5. c  
C. 1. Air is a mixture of gases. 2. Gases, water vapours, dust particles, smoke and germs. 3. By growing more plants. 4. Breeze is a soft blowing wind while storm is a fast blowing wind. 5. Wind helps ..... on water; Wind moves ..... of a windmill.

#### 10. Water

- A. 1. Rain 2. Wells 3. dirty 4. tap 5. hosepipes  
B. 1. b 2. a 3. c 4. c 5. b  
C. 1. Rainwater fills ..... called surface water. 2. Wells, tube wells ..... ground water. 3. Potable water 4. The clean ..... potable water. 5. Close the ..... bathing.  
D. 1. Driving 2. Rafting 3. Surfing 4. Water pool

#### 11. The Water Cycle

- A. 1. Water 2. Steam 3. freezing 4. solid  
B. 1. c 2. a 3. c 4. c 5. a  
C. 1. Solid, liquid and gas. 2. When water changes ..... called evaporation. 3. When steam ..... called condensation. 4. The sun heat ..... seas and oceans. 5. Water

- vapours rise up and cool down to form clouds.  
D. 1. Snow 2. Steam 3. Ice 4. Sun

#### 12. Weather and Seasons

- A. 1. Weather 2. Season 3. Loo 4. Winter season 5. Rainbow  
B. 1. a 2. c 3. b 4. a 5. b  
C. 1. Weather is a ..... and time. 2. When one ..... season; five seasons. 3. We wear cotton ..... calm. We enjoy ..... and fruit juices. 4. December and January 5. During this season ..... rains a lot.

#### 13. Rocks and Minerals

- A. 1. GRANITE 2. MARBLE 3. CHINA CLAY 4. QUARTZ 5. SILICA  
B. 1. a 2. a 3. b 4. c 5. c  
C. 1. Rocks are ..... valleys. 2. Rocks are ..... and soft. 3. Slate. 4. Gold and silver 5. Gemstones are ..... different colours. Ruby and Sapphire.

#### 14. Sun, Light and Shadow

- A. 1. Wrong 2. Right 3. Right 4. Wrong 5. Right  
B. 1. c 2. b 3. a 4. c 5. b  
C. 1. The sun is a ..... the west. 2. The sun heats ..... clothes. 3. Bulb and tube light. 4. When any object ..... called a shadow. 5. Because the shape ..... position of the sun.

## SCIENCE NATURE-3

### 1. Living and Non-living Things

A. 1. Right 2. Wrong 3. Wrong 4. Right 5. Wrong

B. 1. c 2. a 3. a 4. b 5. c

C. 1. All people, animals and plants are living things. Things that are made by man and can not breathe are non-living things. 2. Man-made things: Things that are made by people are called man-made things. Natural things: Things that are created in nature are called natural things. 3. Cut flowers are once living as they were once a part of living plants. 4. Many animals such as cows, buffaloes, camels, tigers breathe through their nostrils and insects like cockroaches breathe through their tiny air holes called spiracles. 5. Humans, animals and plants reproduce their own kind. Humans and most animals give birth to babies that are like themselves. This is called reproduction.

### 2. Plant Life

A. 1. Right 2. Right 3. Wrong 4. Wrong 5. Wrong

B. 1. a 2. c 3. b 4. a 5. b

C. 1. a. The part of the plant that remains under the ground is called the root. b. The part which is above the ground is called the shoot. 2. Roots absorb water and nutrients that plants need to grow. They can also store food. 3. The shoot system includes the above-ground structures of plants. That means it includes the leaves, buds, stems, flowers and fruits of plants. 4. The leaves take sunlight and carbon dioxide from the air and convert the nutrients to plant food. This process is called photosynthesis. 5. The underside of the leaf has very tiny pores, called stomata. 6. The process by which a seed grows into a tiny plant is called germination.

D. 1. Stem 2. Roots 3. Flower 4. Leaves 5. Fruit

### 3. Eating Habits of Animals

A. 1. Right 2. Wrong 3. Right 4. Wrong 5. Right

B. 1. a 2. a 3. c 4. b 5. b

C. 1. Grass, leaves and plants. 2. Animals that eat both ..... as omnivores. 3. Some herbivores ..... chewing of cud. 4. Omnivores ..... small pieces. 5. Dogs and cats ..... lapping.

D. 1. Goat 2. Cow 3. Squirrel 4. Frog 5. Dog

### 4. Wonderful Birds

A. 1. Right 2. Right 3. Wrong 4. Right 5. Wrong

B. 1. a 2. b 3. a 4. c 5. b 6. c

C. 1. c 2. d 3. e 4. b 5. a 6. f

D. 1. feathers 2. warm 3. Cardinal 4. talons 5. Penguins

E. 1. Body feathers, flight feathers, down feathers. 2. In upstroke ..... flying. 3. Birds like woodpeckers ..... their nests. 4. Birds like sparrows ..... at the back. 5. A tailor bird ..... fibres. 6. The birds ..... hatching.

F. Do yourself

### 5. The Human Body

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

B. 1. a 2. b 3. c 4. a 5. c

C. 1. Cells are ..... activities. 2. The human ..... column. 3. Digestion is ..... the anus. 4. The lungs ..... body. 5. Excretory ..... carbon dioxide.

D. Do yourself

### 6. Safety First

A. 1. Wrong 2. Wrong 3. Right 4. Right 5. Wrong

B. 1. a 2. c 3. c 4. a 5. c

C. 1. Knives ..... or appliances. 2. Diwali ..... quickly. 3. Do not ..... school gate. 4. First aid is ..... arrives. 5. If there's bleeding ..... pat dry. D. Do yourself

### 7. Housing and Clothing

A. 1. Igloos 2. Houseboat 3. Cotton clothes 4. Silk 5. Polyester

B. 1. b 2. a 3. c 4. b 5. b

C. 1. We all ..... our house. 2. People ..... called nomads. 3. A good house ..... germ-free. 4. We should ..... kept covered. 5. Fibres we get ..... man-made

fibres. **D.** Do yourself

### 8. Air and Water

**A.** 1. Wrong 2. Right 3. Right 4. Wrong 5. Right

**B.** 1. b 2. c 3. b 4. c 5. a

**C.** 1. Air is ..... to live. 2. Air contains ..... of glass. 3. Water exists ..... into water. 4. In the atmosphere ..... precipitation. 5. The water cycle ..... back again. **D.** Do yourself

### 9. Weather and Seasons

**A.** 1. winds 2. rainy 3. loo 4. hilly 5. spring

**B.** 1. b 2. a 3. a 4. c 5. c

**C.** 1. On some days sun shines ..... of the day. On some days ..... cloudy days. 2. We wear ..... sweat. 3. They use ..... warm. 4. During monsoon ..... getting wet. 5. Floods cause a lot ..... roads.

**D.** 1. Sunny 2. Rainy 3. Storm 4. Breeze

### 10. The Earth

**A.** 1. Right 2. Wrong 3. Right 4. Wrong 5. Right

**B.** 1. b 2. a 3. b 4. a 5. c

**C.** 1. Our Earth is ..... their life. 2. Photographs ..... called astronauts. 3. The Earth ..... called rotation. 4. The rotation of ..... 24 hours. 5. Our Earth ..... a year.

### 11. The Solar System

**A.** 1. Sun 2. Planets 3. Moon 4. New moon 5. Constellations

**B.** 1. a 2. b 3. c 4. b 5. a

**C.** 1. Our solar system ..... planets. 2. There are ..... Neptune. 3. Crescent moon ..... full moon. 4. Some stars ..... constellations. 5. A telescope is ..... stars.

**D.** Do yourself

### 12. Soil and Rocks

**A.** 1. Plants 2. Soil 3. Humus 4. Loamy 5. Diamond

**B.** 1. b 2. c 3. a 4. c 5. a

**C.** 1. The topmost ..... soil. 2. Soil is formed ..... or more. 3. Sandy, clayey and loamy. 4. Loamy soil ..... plants. 5. Granite is ..... buildings.

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

### 13. Light, Sound and Force

**A.** 1. Right 2. Wrong 3. Right 4. Wrong 5. Right

**B.** 1. a 2. c 3. b 4. b 5. a

**C.** 1. Bulb, torch ..... on them. 2. Shadows are ..... of light. 3. Sounds that ..... noises. 4. Force helps us ..... rolling it. 5. The force that ..... called friction.

**D.** 1. Pushing 2. Pulling 3. Pushing

### 14. Measurement

**A.** 1. a 2. b 3. c 4. c 5. c

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

**C.** 1. scale 2. Capacity 3. litre 4. hours 5. Temperature

**D.** 1. Metre (m) 2. Capacity is ..... hold. 3. Time is ..... seconds. 4. Temperature ..... object is. 5. The standard ..... kilogram (kg). **E.** Do yourself

## SCIENCE NATURE-4

### 1. Food for Plants

- A. 1. Wrong 2. Right 3. Right 4. Wrong 5. Wrong 6. Right
- B. 1. a 2. b 3. c 4. b 5. a 6. b
- C. 1. The leaf blade or lamina ..... place. 2. Chlorophyll, sunlight, water and carbon dioxide. 3. Chlorophyll 4. In stomata, exchange of gases between the leaf and atmosphere takes place. The pores also help in the loss of water from the plant, called transpiration. 5. Moulds and mushrooms get their food from dead and decayed plants and animals. 6. The ultimate source of ..... consumers. 7. A chain exists in nature for obtaining food. A chain that shows a series of organisms where each member depends on the lower member in the series for food is called a food chain. D. Do yourself

### 2. Adaptations in Plants

- A. 1. Right 2. Wrong 3. Right 4. Wrong 5. Wrong 6. Right
- B. 1. b 2. c 3. b 4. a 5. c 6. b
- C. 1. The living and dwelling place of a plant or an animal is known as its habitat. 2. The plants have to adjust according to the environment by changing some of their parts. These modifications in the structure and function of an organism to adjust the various habitats are known as adaptations. 3. Trees growing in plains ..... sunlight. 4. The trees in these ..... their branches. 5. The roots of floating plants are ..... spongy stem. 6. These plants are carnivorous in nature. Their leaves are modified to trap insects. D. Do yourself

### 3. Reproduction in Animals

- A. 1. f 2. e 3. b 4. c 5. d 6. a
- B. 1. a 2. b 3. c 4. b 5. a
- C. 1. The process by ..... reproduction. 2. Animals like lion ..... after few days. 3. An egg has ..... provides it with water. 4. Frogs lay their eggs ..... grows into an adult frog. 5. Four stages or three stages. D. Do yourself

### 4. Adaptations in Animals

- A. 1. habitat 2. fins 3. hump 4. arboreal 5. horns
- B. 1. a 2. c 3. b 4. c 5. b
- C. 1. Camels have thick skin and long legs to keep them off from the hot sand and help to keep its body cool. They ..... water and food. 2. Polar bear has ..... protects it from enemies. 3. They have lungs ..... moist skin. 4. Animals like tick ..... parasites. 5. Polar bear and chameleon are two animals that camouflage. Thus, they confuse ..... camouflaging. 6. Some birds of cold ..... from severe cold.

- D. 1. Fish 2. Hen 3. Tortoise 4. Octopus

### 5. Our Food and Nutrition

- A. 1. Right 2. Wrong 3. Right 4. Right 5. Right
- B. 1. a 2. b 3. a 4. c 5. b 6. a
- C. 1. Rice, Wheat 2. Butter, Ghee 3. Eggs, Pulses 4. Milk, Carrot 5. Tomato, Orange 6. Milk, Cheese
- D. 1. Food contains ..... called nutrients. 2. Carbohydrates, fats, proteins, vitamins and minerals. 3. Carbohydrates give us ..... rich in carbohydrates. 4. Proteins help our ..... called body-building nutrients. 5. Roughage helps the body to get rid of undigested food. E. Do yourself

### 6. Teeth Structure and Digestion

- A. 1. temporary 2. root 3. enamel 4. Canines 5. mouth 6. stomach
- B. 1. b 2. b 3. a 4. c 5. a 6. c
- C. 1. Wrong 2. Wrong 3. Right 4. Right 5. Wrong
- D. 1. Human beings ..... and the permanent. 2. A tooth is basically ..... called the neck. 3. Incisors, Canines, Premolars and Molars. 4. For healthy teeth ..... our teeth strong. 5. The process by which ..... the body through the anus. 6. Wash your hands ..... interval of time.
- E. Do yourself

### 7. Safety Rules

- A. 1. Accidents 2. potholders 3. wet 4. pavement 5. hand signals 6. cold water

B. 1. b 2. b 3. c 4. a 5. b 6. b

C. 1. Right 2. Wrong 3. Right 4. Right 5. Wrong 6. Right

D. 1. Do not play ..... to handle hot objects.  
2. Do not leave ..... you may fall down.  
3. Do not run up ..... fight with anybody.  
4. Cross the road ..... traffic light is red.  
5. First aid is the ..... doctor arrives.  
6. Wash the cut ..... adhesive bandage.  
E. Do yourself

### **8. Clothes**

A. 1. good 2. Cotton 3. rubber 4. animals  
5. silk worm

B. 1. a 2. a 3. c 4. c 5. c

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

D. 1. We wear clothes ..... rain and insects.  
2. Some people wear ..... called uniform.  
3. Natural fibres and Man-made fibres. 4. Cotton is obtained from ..... beautiful clothes. 5. Clothes should be ..... insects or moths.

E. 1. N 2. N 3. M 4. N 5. M 6. N

### **9. Weather, Air and Water**

A. 1. gases 2. oxygen 3. three 4. bacteria  
5. boiling

B. 1. b 2. a 3. a 4. c 5. b

C. 1. Right 2. Wrong 3. Wrong 4. Right 5. Wrong

D. 1. Air is a mixture ..... and water vapours. 2. During the day ..... land breeze. 3. Evaporation is the ..... its vapour form. Condensation is the ..... its liquid form. 4. The heat of the sun ..... called the water cycle. 5. Soluble and insoluble 6. When water is ..... called decantation. E. Do yourself

### **10. States of Matter**

A. 1. Wrong 2. Right 3. Right 4. Wrong 5. Wrong

B. 1. a 2. c 3. c 4. b 5. c

C. 1. Table, Chair 2. Juice, Coffee 3. Perfume, Smoke

D. 1. Matter is anything ..... made up of atoms. 2. Solid, liquid and gas. 3. Solids have definite ..... touch. Liquids do not ..... poured. Gases do not ..... perfume. 4. In gases, the ..... at high speed. 5. The solid substance ..... called solvent.

E. Do yourself

### **11. Force, Work and Energy**

A. 1. force 2. muscular force 3. simple

machines 4. inclined plane 5. energy 6. geothermal energy

B. 1. b 2. b 3. c 4. a 5. c 6. c

C. 1. d 2. a 3. f 4. b 5. c 6. e

D. 1. Force helps us ..... change its direction. 2. The force that ..... gravitational force. 3. Wheel and axle ..... move loads. 4. Pulley is used ..... sailboat. 5. Sun, Wind, Water, Fuel and Earth. 6. Mechanical energy, chemical energy, heat energy, electrical energy, magnetic energy and sound energy.

E. 1. Frictional Force 2. Mechanical Force 3. Gravitational Force 4. Muscular Force 5. Gravitational Force

### **12. Our Universe**

A. 1. Right 2. Wrong 3. Wrong 4. Right 5. Wrong 6. Right

B. 1. c 2. b 3. a 4. a 5. a 6. b

C. 1. Stars are not ..... called planets. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. 2. Mercury is the ..... solar system. 3. Venus is the ..... and evening. 4. The Earth has ..... centre of the Earth. 5. Volcano is the ..... called lava. 6. The spinning ..... the Earth.

D. 1. Sun 2. Earth 3. Mars 4. Saturn 5. Neptune

### **13. Soil**

A. 1. soil 2. weathering 3. living 4. Sandy 5. soil erosion

B. 1. a 2. c 3. c 4. b 5. a

C. 1. Right 2. Right 3. Wrong 4. Right 5. Right

D. 1. Soil is formed ..... and forms soil. 2. Soil is a mixture ..... air and water. 3. The uppermost layer ..... rock (bedrock) layer. 4. Sandy soil ..... to touch. Clayey soil ..... lot of water. Loamy soil ..... holding capacity. 5. The top layer ..... called soil erosion. E. Do yourself

### **14. Pollution**

A. 1. Wrong 2. Right 3. Wrong 4. Wrong 5. Right

B. 1. a 2. a 3. c 4. b 5. b

C. 1. The addition ..... called pollution. 2. Air pollution, Water pollution and Land pollution 3. Gases like ..... also pollute air. 4. Water pollution ..... animals and plants. 5. Walking or cycling ..... properly and safely. D. Do yourself



## SCIENCE NATURE-5

### 1. Growing Plants

- A. 1. Wrong 2. Right 3. Right 4. Right 5. Wrong 6. Right
- B. 1. b 2. c 3. b 4. a 5. c
- C. 1. c 2. b 3. a 4. e 5. d
- D. 1. Organisms produce more of their own kind by the process called reproduction. 2. Seeds with one cotyledon are called monocots. Seeds with two cotyledons are called dicots. 3. Germination is the process by which a plant grows from a seed. 4. Seeds of some plants are very light. They have special parts such as hair or wings like structure which help them to be blown around with the breeze or wind. 5. Winter crops are known as Rabi crops. Summer crops are known as Kharif crops. 6. The practice of growing plants on a large scale is called agriculture. Various stages of agriculture are: ploughing, sowing, adding manure and fertilisers, irrigation, protecting crops and harvesting and winnowing. E. Do yourself

### 2. Animals: Habitat and Adaptation

- A. 1. Right 2. Right 3. Wrong 4. Wrong 5. Right 6. Right 7. Wrong
- B. 1. c 2. c 3. a 4. b 5. a 6. c
- C. 1. c 2. e 3. f 4. a 5. d 6. b
- D. 1. A habitat is a place where an animal lives that provides all of its needs for survival including food, water, shelter and a place to raise its young. 2. A desert is a dry place ..... are found in deserts. 3. The outer covering of animals keeps them warm. 4. The colour and/or pattern of an animal often allows it to either blend in or stand out from its environment. This is called camouflage. 5. Mosquitoes suck blood from the body ..... seeds and fruits. 6. Ducks waddle because they ..... is called waddling. 7. Many animals tend to change ..... is known as migration. E. Do yourself

### 3. Skeletal System and Muscular System

- A. 1. organism 2. backbone 3. joint 4. pivot 5. movement 6. Voluntary

- B. 1. b 2. c 3. a 4. c 5. a 6. c

- C. 1. The skeletal system 2. Vertebrae 3. Femur 4. Ball and socket joint 5. Cardiac

- D. 1. The skeletal system ..... of our body. 2. Bones are hard ..... bone marrow. 3. The different ..... and girdles. 4. The point where two ..... called ligaments. 5. Pivot joint ..... movable joints. 6. There are three ..... cardiac muscles.

- E. Do yourself

### 4. Nervous System

- A. 1. Right 2. Wrong 3. Right 4. Right 5. Right 6. Wrong

- B. 1. b 2. a 3. c 4. a 5. b 6. b

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

- D. 1. Our nervous system ..... and the nerves. 2. The cerebrum is the ..... circulating blood. We have three ..... from the brain. 3. Our brain ..... reflex actions. 4. Our eyes ..... to the brain. 5. The ear has ..... in the inner ear.

- E. Do yourself

### 5. Food, Health and Hygiene

- A. 1. Carbohydrates 2. Proteins 3. Calcium 4. sleep 5. disease 6. Virus

- B. 1. b 2. b 3. c 4. c 5. c 6. b

- C. 1. The food we eat ..... and minerals. 2. The food pyramid ..... and healthy. 3. Some diseases can spread ..... called germs. Non-communicable ..... deficiency diseases. 4. There are different ..... athlete's foot. 5. Communicable diseases ..... indirect contact. 6. Diseases that are ..... deficiency diseases.

- D. Do yourself

### 6. Safety and First Aid

- A. 1. Wrong 2. Right 3. Wrong 4. Right 5. Right 6. Wrong

- B. 1. c 2. b 3. a 4. c 5. b 6. a

- C. 1. Always check the brakes ..... or stones. 2. Never go near ..... in a boat. 3. If your clothes ..... put off fire. 4. A sprain occurs ..... swell up. A fracture ..... move the part. 5. Sit down ..... to a doctor. 6. Wash the

wound ..... anti-rabies injection.

D. Do yourself

### 7. Air and Water

A. 1. atmosphere 2. ozone layer 3. oxygen

4. Rain 5. Evaporation 6. insoluble

B. 1. a 2. c 3. c 4. b 5. c 6. a

C. 1. Our planet Earth ..... the atmosphere.

2. The atmosphere of the ..... in the space.

3. With the help of given ..... supports

combustion. Water can dissolve ..... in

many vehicles. 4. Atmosphere is very

important ..... water cycle. 5. In this

process, dirty ..... is the pure water. 6.

What you will do ..... in the glass.

D. Do yourself

### 8. The Moon

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

B. 1. c 2. a 3. b 4. a 5. a 6. b

C. 1. Right 2. Right 3. Wrong 4. Wrong 5. Right

D. 1. The surface of the moon ..... and

valleys. 2. The moon has no ..... on

the moon. 3. The moon changes .....

waning phase of the moon. 4. When the sun

..... partial lunar eclipse. 5. An

artificial satellite ..... upon their

uses. 6. Uses of Satellites ..... around

the world. E. Do yourself

### 9. Soil

A. 1. Soil 2. Clayey 3. living 4. deserts

5. Deforestation 6. embankments

B. 1. a 2. b 3. c 4. b 5. a 6. b

C. 1. Our Earth's crust ..... and

animals. Soil is important .....

fertility of soil. 2. Sandy, clayey and loamy. 3.

The upper layer ..... is bedrock. 4.

The removal of topsoil ..... growth of

plants. 5. The factors ..... cause soil

erosion. 6. Plant more and ..... against

winds. D. Do yourself

### 10. Rocks and Minerals

A. 1. c 2. e 3. b 4. f 5. a 6. d

B. 1. b 2. c 3. b 4. a 5. c 6. c

C. 1. Wrong 2. Wrong 3. Wrong 4. Right 5.

Right 6. Wrong

D. 1. They are the earliest ..... form

igneous rocks. 2. When lava cools .....

foot scrubber. 3. The Earth's surface

..... called sedimentary rock. 4. Slate

..... and in watches. 5. When plants

died ..... remains into coal. 6.

Petroleum is also ..... and cosmetics.

E. Do yourself

### 11. Force, Work and Energy

A. 1. Frictional 2. muscular 3. Energy 4. coal

5. solar energy 6. windmills

B. 1. a 2. c 3. b 4. c 5. b

C. 1. This push or pull ..... the moving

object. 2. Frictional force helps ..... easily

on board. 3. Magnets exert .....

magnetic force. 4. Work is done .....

a shelf, etc. 5. To do work ..... do work.

6. Light Energy ..... Biomass Energy.

D. 1. Frictional Force 2. Electrostatic Force

3. Elastic Force 4. Frictional Force

### 12. Simple Machines

A. 1. rod 2. effort 3. levers 4. Pulley 5. wheel

6. fulcrum

B. 1. b 2. a 3. c 4. c 5. c 6. a

C. 1. Simple machines ..... Screw. 2.

A lever has three ..... to be done. 3. In

order to move ..... called fulcrum. 4.

A pulley is a ..... heavy engines. 5.

Fixed pulley ..... to pull the load.

### 13. States of Matter

A. 1. Right 2. Wrong 3. Right 4. Right 5. Wrong

6. Wrong

B. 1. b 2. c 3. a 4. a 5. b 6. a

C. 1. Matter contains ..... 'building blocks

of matter'. 2. Matter exists in ..... all

directions. 3. A change in which no

..... of a bulb. 4. A change in

which new ..... of food. 5. Solubility

is the ..... uniform nature. 6. Liquids

that dissolve ..... surface of water.

D. Do yourself

### 14. Natural Disasters

A. 1. a 2. b 3. a 4. b 5. b

B. 1. c 2. e 3. a 4. f 5. b 6. d

C. 1. tectonic 2. seismic 3. seismograph

4. crater 5. Active

D. 1. A natural disaster ..... life and

property. 2. An earthquake ..... seismic

waves. 3. Types of Volcanoes ..... an

extinct volcano. 4. Tsunamis are giant

..... along the coasts. 5. It is a type of

..... as a hurricane.

E. Do yourself

### SCIENCE NATURE-6

#### 1. Food and its Sources

**A.** 1. Fuel 2. Nutrients 3. Omnivores  
4. Ingredients 5. Milk 6. Autotrophs  
7. Scavengers

**B.** 1. b 2. a 3. c 4. a 5. d 6. c

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

**D.** 1. The food provides energy and helps the body to grow and replace worn-out cells. 2. Non-vegetarians are the people who eat plant products as well as animal products such as meat, fish, etc. 3. The materials used to prepare any food item are called ingredients. 4. Parts of plants which can be eaten raw or in cooked form are called edible parts. 5. We make many products from milk, like butter, cheese, cream, curd and paneer. These products are called dairy products. 6. Scavenger is an animal that mainly consume dead bodies of animals. They help to keep the surroundings clean.

**E.** 1. The function of food are : a. It provides energy for various ..... fit and healthy. 2. We eat different parts of plants. Parts of plants which can be eaten raw or in cooked form are edible parts. .... vegetables and seeds. 3. Besides milk, animal ..... vitamins and minerals. 4. Autotrophs: Living organisms which ..... and for others. Heterotrophs: Living organisms which ..... human beings, etc. 5. Carnivores eat only other animals. .... to eat the flesh. 6. A food chain is a series ..... one living thing to another.

**F.** Do yourself

#### 2. Components of Food

**A.** 1. Carbohydrates 2. Sugars  
3. Animal 4. Minerals 5. Nutrients 6. Hungry 7. Protein

**B.** 1. a 2. c 3. d 4. d 5. b 6. a

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

**D.** 1. The process by which living things obtain and use food is called nutrition. 2. Simple carbohydrates and complex carbohydrates. 3. Butter, cheese, cream, ghee, milk, eggs and meat are animal sources of fat. 4. Roughage is the substance in plant foods that our body cannot digest. 5. The daily intake of food which contains all the necessary nutrients in the right quantities is called a balanced diet.

6. Diseases caused by the lack of some nutrients in food are known as deficiency diseases.

**E.** 1. Carbohydrates are the main sources ..... carbohydrates during digestion. 2. Proteins help the body ..... peas, grams, and beans. 3. Water helps to absorb ..... temperature through sweating. 4. A person's daily diet ..... protein-rich diet. 5. Deficiency of proteins in ..... seen over the body. **F.** Do yourself

#### 3. Fibre to Fabric

**A.** 1. fabric 2. Denim 3. cotton 4. twisting 5. wool, spun 6. synthetic

**B.** 1. a 2. b 3. d 4. d 5. a 6. b 7. a

**C.** 1. T 2. T 3. F 4. T 5. F 6. T 7. F

**D.** 1. Clothes are ..... needs. They protect ..... good and smart 2. Primitive people did not ..... of dead animals. 3. Clothes are made up ..... to make fabrics. 4. The advantages

of cotton ..... and humid weather. 5. Synthetic clothes are ..... and humid climate. 6. Cotton is a soft ..... the cotton plant.

**E.** 1. Weaving is a process ..... woven by this method. 2. In knitting a single ..... or by machine. 3. The fibres are made ..... is called spinning. A number of fibres ..... twisting them together. 4. Jute is produced ..... process is called retting. 5. The fibres of some ..... examples of synthetic fibres.

**F.** Do yourself

#### **4. Sorting Materials into Groups**

**A.** 1. sorting 2. supermarket 3. material 4. translucence 5. soluble 6. smooth 7. volume

**B.** 1. a 2. b 3. c 4. b 5. c 6. b 7. b

**C.** 1. g 2. f 3. d 4. c 5. e 6. b 7. a

**D.** 1. The bark of tree, rock and sand paper. 2. You feel different ..... basis of their texture. 3. Cotton, wool and rubber ball. 4. In solids, silver ..... conductors of heat. 5. Clothes, paper wool ..... conductors of heat.

**E.** 1. The method of grouping ..... are stocked together. 2. Placing as sorting ..... of different types. 3. If almost all ..... a clear glass. If light can pass through ..... dust-laden air. 4. Some materials are soluble ..... are soluble in water. 5. You may have noticed ..... bronze have lustre.

**F.** Do yourself

#### **5. Separation of Substances**

**A.** 1. sediments 2. filtration 3. distilled 4. apparatus 5. bullocks 6. immiscible 7. evaporation 8. temperature

**B.** 1. c 2. a 3. a 4. a 5. c 6. a 7. a 8. c

**C.** 1. T 2. F 3. T 4. T 5. F 6. F 7. F

**D.** 1. d 2. f 3. b 4. e 5. c 6. a

**E.** 1. A mixture is a ..... physical

properties. 2. A mixture in which ..... a homogeneous mixture. 3. A mixture whose ..... a heterogeneous mixture. 4. The process of separation ..... called filtration. For example. After preparing ..... using a strainer. 5. It is a method ..... flour pass through.

**F.** 1. Many naturally occurring ..... following reasons. For example. We ..... potable water. Sometimes, we need to ..... (crude oil). While producing a ..... of the substance. 2. It is a method ..... stones from sand. 3. The process of settling ..... water to the cities. 4. Distillation is done ..... left in the flask. 5. Fold the circular pieces ..... separated by filtration. 6. A solution when reached ..... saturated solution. If we keep adding ..... has become saturated.

**G.** 1. Heterogenous 2. Harvesting 3. Filtration 4. Evaporation 5. Distillation 6. Sedimentation

#### **6. Changes Around Us**

**A.** 1. irreversible 2. chemical 3. lemon juice 4. expansion 5. heated, contracted 6. thermometer

**B.** 1. a 2. b 3. c 4. a 5. a

**C.** 1. T 2. F 3. T 4. T 5. F 6. T 7. F

**D.** 1. The effects of changes ..... by some cause. 2. Changes that can be easily ..... reversible changes. Melting of ice-cream ..... reversible changes. 3. Changes that cannot ..... irreversible changes. For example : Burning ..... fuel is an irreversible change. 4. You might have ..... making cottage cheese. 5. Other change that ..... spoilage of food.

**E.** 1. A change in which no new ..... called a physical change. Breaking of a ..... cause of the change. 2. A change in which new ..... called a chemical

change. Burning of a candle ..... vapour (new substances). 3. You have already ..... solids on cooling. 4. Corrosion is another ..... exposure to moisture. 5. You may have seen ..... rails in summers.

**F.** 1. Reversible 2. Condensation 3. Irreversible 4. Expansion 5. Contraction

### **7. Getting to Know Plants**

**A.** 1. herbs 2. aerial roots 3. internode 4. axillary buds 5. veins 6. ovules 7. tendrils

**B.** 1. b 2. a 3. c 4. c 5. d 6. a

**C.** 1. c 2. g 3. e 4. f 5. d 6. b 7. a

**D.** 1. The roots spread ..... prevent soil erosion. 2. In addition, there ..... examples of climbers. 3. The stem of some ..... by the leaves. 4. If you look carefully ..... provide support. 5. Leaves of some ..... weak climbers.

**E.** 1. Tap root is the main ..... as secondary roots. Fibrous roots which grow ..... wheat and rice. 2. The stem holds the plant ..... thus provide support. 3. The stomata also ..... plant form the soil. 4. Leaves perform various ..... known as photosynthesis. **F.** Do yourself

### **8. Body Movements**

**A.** 1. Skeleton 2. femur 3. slimy 4. bristles 5. vertebrae 6. single cell 7. tibia, fibula

**B.** 1. b 2. a 3. d 4. d 5. c 6. a 7. a

**C.** 1. F 2. T 3. T 4. F 5. F 6. T 7. T 8. F

**D.** 1. A tissue, as you ..... form an organ. 2. Groups of different ..... an organ system. 3. Bones are joined ..... called ligaments. 4. At the place ..... against each other. 5. The spine is also ..... twist our back.

**E.** 1. The skeletal system ..... protect delicate internal organs. 2. The

ribs are thin, ..... stomach and the kidneys. 3. Joints are of four main ..... and forth or sideways. 4. Body movements are the ..... bend and straighten the legs. 5. Snails have a soft body, which they can pull ..... crawl on a variety of surfaces. **F.** Do yourself

### **9. The Living Organisms and their Surroundings**

**A.** 1. desert 2. tropical 3. Tundra 4. rainforest 5. submerged 6. migrate 7. climate

**B.** 1. a 2. b 3. c 4. c 5. b 6. a 7. d

**C.** 1. T 2. T 3. F 4. F 5. T 6. F 7. T

**D.** 1. The word 'habitat' means ..... place for them. 2. It refers to salt ..... found in marine habitats. 3. Plants living in water ..... also known as hydrophytes. 4. The habitat provides ..... survive, breed and flourish. 5. Abiotic components are the ..... biotic components.

**E.** 1. Some of the adaptations found ..... and low height intensities. 2. The presence of specific ..... is called adaptation. For example, a fish ..... a camel in the desert. 3. Depending upon the living conditions ..... goats, yaks, sheep and pines. 4. Some of the adaptations found ..... enable them to float. 5. Camels are adapted to live in hot dry ..... for walking on soft sand.

**F.** 1. Habitat 2. Succulents

3. Xerophytes 4. Hydrophytes

5. Camouflage 6. Nocturnal

### **10. Motion and Measurement of Distances**

**A.** 1. measurement 2. linear 3. periodic 4. oscillatory motion 5. estimation 6. millimetre

**B.** 1. b 2. b 3. c 4. a 5. d 6. b

**C.** 1. d 2. e 3. f 4. c 5. a 6. b

**D.** 1. There was a need ..... called

standard units. 2. When an object changes its position ..... it is said to be at rest. 3. The Earth rotates (rotational motion) ..... path (translational motion). 4. The General Conference on Weights ..... in 1960. 5. When an object moves to and fro ..... as oscillatory motion.

**E.** 1. In ancient times, people have to travel ..... to measure time. 2. In taking measurement of a length, ..... error is called parallax error. 3. A thread or a divider can ..... the distances between the arms. 4. When a body moves in a ..... around a fixed point. **F. Do yourself**

### **11. Light, Shadows and Reflections**

**A.** 1. sensation 2. luminous 3. translucent 4. ideal mirror 5. parallel beam 6. shadow 7. plane mirror

**B.** 1. a 2. c 3. b 4. a 5. b 6. c 7. c

**C.** 1. F 2. T 3. T 4. F 5. T 6. F 7. T

**D.** 1. You will notice that ..... the path of light would be invisible. 2. The objects that do not ..... non-luminous objects. Such as a book, table, cricket ball and walls are the examples of non-luminous objects. 3. An optical medium ..... translucent or opaque. 4. When light falls on ..... we can see that object. 5. When an opaque object ..... shadow of the object. 6. The property of light ..... rectilinear propagation of light.

**E.** 1. An object which emits light ..... called artificial sources of light. 2. Optical media are of three ..... let any light to pass through it. 3. A shadow has the following characteristics: ..... formed a screen is necessary. 4. When you switch on a torch in the ..... travels in a straight line path. 5. Light travels in the form of rays ..... of images in a

pin-hole camera. **F. Do yourself**

### **12. Electricity and Circuits**

**A.** 1. transmission 2. filament 3. electric cell 4. terminals 5. incomplete 6. electric current 7. graphite

**B.** 1. b 2. a 3. c 4. a 5. d 6. a

**C.** 1. d 2. e 3. f 4. b 5. c 6. a

**D.** 1. When we connect the two ends ..... electric current is called electric circuit. 2. The electric circuit in which ..... known as a closed circuit. 3. The electric circuit in ..... is broken is called an open circuit. 4. A dry cell has two ends ..... metal plate and is negative (-).

**E.** 1. We use a variety of things in our ..... on electricity are rather wide. 2. The principle on which an ..... them and torch will not glow. 3. Materials that allow an electric current ..... which are insulators. 4. An electric cell is used ..... electricity or electric current. There are some chemicals inside ..... replaced by new cells. Secondary cells are the cells ..... are also called rechargeable cells. They are mainly used in ..... and car batteries.

**F.** 1. Circuit 2. Current 3. Insulator 4. Switch 5. Filament 6. Cell

### **13. Fun with Magnets**

**A.** 1. directions 2. repels 3. magnetism 4. magnetic 5. weak 6. magnet

**B.** 1. a 2. c 3. d 4. a 5. a 6. b

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

**D.** 1. Any substance ..... called a magnet. Magnets are found in Northern Greece called Magnesia. 2. Magnets are used ..... to produce electricity. 3. In a bar or ..... is the south pole. 4. Magnetite is a natural ..... shapes and strength. 5. Besides iron, there are two other ..... magnetic substances. 6. Wood and plastic are ..... by a magnet.

E. 1. The most popular legend related ..... place Magnesia or Magnes himself. 2. The instrument ..... called a magnetic compass. A freely suspended magnet ..... the Earth by travellers. 3. To keep them safe, bar magnets ..... called magnetic keepers. 4. The important properties of magnets ..... such as iron. 5. Credit cards, ATM cards and ..... magnet to produce electricity. 6. When like poles of the two magnets ..... the magnets are facing each other.

F. Do yourself

#### **14. Water**

A. 1. aquifers 2. frozen 3. water vapour 4. accumulation 5. population 6. leakage 7. water 8. famine

B. 1. a 2. c 3. c 4. b 5. d 6. a 7. a

C. 1. T 2. F 3. T 4. T 5. F 6. T 7. T 8. F

D. 1. c 2. d 3. e 4. a 5. b 6. g 7. f

E. 1. About 71 per cent of the ..... known as the blue planet. 2. Water occurs in all ..... different temperatures. 3. The various sources of water on the earth are as follows: rainwater, groundwater, surface water, ocean water and frozen water. 4. Most of the water ..... of streams called natural springs. 5. Some ways of water conservation are: a. Avoid wastage of water and recycle ..... absorption of water by soil.

F. 1. The state of water can be ..... is known as condensation. 2. The water in sea, river, ..... is called precipitation. 3. Utilising a resource carefully ..... become less useful. 4. One way of ..... 'catch water where it falls'. 5. The water level in ponds, ..... is also badly affected. 6 Surface runoff harvesting: In urban areas, the rain water ..... improve the ground water

level. 7. The cyclic pattern in which ..... is known as the water cycle.

G. Do yourself

#### **15. Air Around Us**

A. 1. rustle 2. atmosphere 3. empty 4. combustion, electric bulbs 5. sunlight 6. dust particles 7. lungs 8. breathing

B. 1. b 2. a 3. c 4. b 5. b 6. a 7. b 8. b

C. 1. T 2. T 3. F 4. T 5. F 6. T 7. T 8. T

D. 1. We can feel the presence ..... fluttering when opened. 2. Atmosphere is a layer of gases ..... becomes thinner and thinner. 3. Nitrogen, oxygen, carbon dioxide, water vapour, dust and smoke are the components of air. 4. Various human activities ..... spoil the quality of air. 5. Take a burning candle and ..... space in the glass occupied by air.

E. 1. Until the eighteenth century, ..... water vapour are also present. 2. Birds have a very ..... easily pass through them. 3. Nitrogen: Nitrogen is a major component of ..... long chimneys in factories. 4. In the process of photosynthesis, plants make their own food ..... plants produce oxygen. 5. Air is not only ..... play several musical instruments.

F. 1. Atmosphere 2. Photosynthesis 3. Stomata 4. Breathing 5. Respiration 6. Pollutants 7. Water Vapour

#### **16. Garbage in, Garbage out**

A. 1. wastes 2. naturally 3. management 4. recycled 5. plastic bags 6. electronic 7. biodegradable

B. 1. d 2. c 3. d 4. a 5. c 6. a

C. 1. Unwanted things ..... called wastes. 2. Waste that can be ..... called biodegradable waste. 3. Waste that does not ..... called non-biodegradable waste. 4. The finished product obtained ..... is excellent for growing plants.

**D.** 1. Waste that can be broken down ..... dangerous for all living creatures. 2. The waste is collected by the ..... to make beneficial products. 3. Management of wastes especially non-biodegradable ..... paper from wood, utensils from metals, etc. 4. Some tips for recycling paper are: ..... from used or old newspapers. 5. Careless disposal of plastic bags ..... bad effect on people who breathe it.

**E.** Do yourself



### SCIENCE-7

#### 1. Nutrition in Plants

**A.** 1. Macronutrients 2. Carbon dioxide 3. Leaf 4. Heterotrophic 5. Host 6. Dead

**B.** 1. c 2. a 3. d 4. b 5. c 6. a

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

**D.** 1. Materials which provide nutrition to organisms are called nutrients. 2. Two modes of nutrition are: Autotrophic nutrition and heterotrophic nutrition. 3. During photosynthesis, leaves convert carbon dioxide and water into glucose and oxygen, in the presence of sunlight. 4. Carbon dioxide enters the leaves through the tiny pores present on the lower surface of the leaves. These tiny pores are called stomata. 5. The upper part of the leaf is where the light falls, and it contains a type of cell called a palisade cell. 6. The mode of nutrition in which an organism takes food from another organism is called heterotrophic nutrition. 7. There are certain plants which live in association with other species and share their food resources these types of plants are called symbiotic plants.

**E.** 1. Carbohydrates, proteins ..... micronutrients. 2. Plants, unlike animals, ..... glucose+oxygen. 3. Photosynthesis is the main way ..... oxygen in air. 4. The mode of nutrition in which an ..... c. insectivorous plants d. symbiotic plants. 5. A parasitic plant lives ..... another mistletoe plant. 6. Insectivorous are the carnivoro-us plants which that

trap their preys, which are live animals, usually insects. Such ..... nitrogen from the surroundings. **F.** Do yourself

#### 2. Nutrition in Animals

**A.** 1. Tongue 2. Holozoic nutrition 3. Pancreas 4. Bacteria 5. Muscles 6. Rumen

**B.** 1. d 2. b 3. b 4. c 5. a 6. b

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

**D.** 1. Ingestion is the process by which an organism takes in its food. 2. Majority of animals take food in the form of solids. This form of nutrition in which food is eaten in soiled is called holozoic nutrition. 3. The mouth contains tongue, teeth and salivary glands. Teeth break the food into smaller particles. This process is called mastication. 4. a. Brush your teeth thoroughly at least twice a day for two minutes each times. b. Use a dry brush for the first two minutes of cleaning. 5. The tongue mixes food with saliva and pushes it so that we can swallow it. 6. The pancreas secretes the pancreatic juice that changes starch into simpler sugars, and proteins into simpler compounds called amino acids. 7. Ruminants are hooved, plant – eating animals that digest their food in two steps. Some examples are cows, buffaloes, goats, sheep and bison.

**E.** 1. The food you eat ..... the form of faces. 2. Amoeba takes in food particles ..... tongue to catch its prey. 3. Nutrition in humans is also ..... is called digestive system. 4. For tearing,

cutting and chewing ..... 6 molars in each jaw. 5. When a portion of food is chewed, ..... in this way the oesophagus helps in digestion. 6. The four chambers of ruminants are rumen, reticulum, omasum, abomasums. Rumen is ..... and digestion progresses.

F. 1. Digestion 2. Assimilation 3. Egestion 4. Mastication 5. Rumen 6. Villi

### 3. Fibre to Fabric

A. 1. natural 2. herbivores 3. mohair 4. alpaca and llama 5. shearing 6. sliver 7. yarn

B. 1. a 2. b 3. c 4. a 5. a 6. c 7. b

C. 1. e 2. f 3. a 4. b 5. d 6. c

D. 1. Cashmere goat, Angora rabbit, Yak, Llama and Camel 2. Pashmina wool is the finest wool obtained from the cashmere goats. 3. Common examples ..... are silk and wool. 4. Some breeds of sheep ..... for different purposes. 5. Shearing does not harm the sheep ..... up of dead cells. 6. The rearing ..... called sericulture.

E. 1. Wool is obtained from ..... and fineness of the fibres. 2. The wool fibres ..... making the yarn. 3. The life cycle of a silk moth ..... in its life cycle. 4. The first stage of making silk is ..... woven into silk fabric. 5. Wool has various properties. It has a ..... natural flower dyes. 6. The properties of silk include a natural ..... strongest natural fibre. 7. Wool is an animal fibre. In fact, ..... keep us warm. On the other hand, silk is an animal ..... Silk is made of proteins.

F. 1. Fleece 2. Pashmina 3. Shearing 4. Sericulture 5. Mulberry

### 4. Heat and Sound

A. 1. Celsius 2. Kelvin 3. freezing point 4. laboratory 5. Sound 6. digital, clinical 7. higher, lower 8. conductors 9. vibration

B. 1. b 2. c 3. a 4. c 5. c 6. a 7. d 8. a 9. c

C. 1. F 2. T 3. T 4. T 5. T 6. F 7. F 8. T 9. T

D. 1. Heat is used to do various ..... considered to be a form of energy. 2. The degree of hotness ..... and Kelvin scale. 3. Celsius is the modern system of ..... those two points. On the other hand, Fahrenheit is the classic ..... by F degree. 4. The number of oscillations per second is called ....., the frequency is 60 Hz. 5. A laboratory thermometer is ..... of a laboratory thermometer. 6. Usually, the freezing point of water is referred to as the lower fixed point. The boiling point of water is referred to as the upper fixed point. 7. A clinical thermometer has a kink ..... contact with the body.

E. 1. The thermometer used to measure ..... contact with the body. 2. Activity-2 3. In coastal areas, breeze ..... a land breeze. 4. We know that we get heat ..... heat and gets heated. 5. Due to vibrations of the bodies, ..... it is also loud. 6. Transfer of heat from one particle to the adjacent ..... place through conduction. 7. The frequency of vibration determines the ..... than that of a drum. F. Do yourself

### 5. Acids, Bases and Salts

A. 1. limestone 2. hydrochloric acid 3. caustic soda 4. constipation 5. litmus 6. indicator 7. acidic

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

C. 1. d 2. e 3. f 4. g 5. b 6. c 7. a

**D.** 1. The substances which are sour ..... contain acids. There are three uses of acids: (i). Sulphuric acid is used in car and inverter batteries. (ii). Nitric acid is used in the manufacturing of explosives such as TNT(trinitrotoluene) and nitroglycerine. (iii). Hydrochloric acid is a part of the gastric acid in humans and many other animals, secreted within the stomach to help in digestion. 2. A base is a substance ..... in skin, hair and nails. 3. Acids react with bases to produce water and salts. 4. Turmeric, litmus and China rose petals 5. When added to a basic solution, litmus turns blue.

**E.** 1. Acids are generally compounds. One of ..... dissolved in water. On the other hand, actually bases are compound ..... are called alkalis. 2. Acids are classified as into ..... concentrated acids. 3. Some of the characteristic properties of acids ..... produce water and salts. Some of the characteristic properties of bases ..... touched by hands. 4. A special type of substance is used to test ..... are the synthetic indicators. 5. A universal indicator is a mixture of ..... called pH paper.

**F.** Do yourself

### **6. Physical and Chemical Changes**

**A.** 1. chemical change 2. curdling of milk 3. products 4. crackers 5. rusted iron 6. vinegar

**B.** 1. b 2. c 3. d 4. c 5. b 6. a

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

**D.** 1. Physical changes and chemical changes 2. Melting of butter and tearing of paper 3. Cooking of food and ripening of fruits 4. It is a chemical reaction ..... iron to rust. 5. Physical changes involve ..... shape, colour

and state. 6. Chemical changes involve ..... simple physical methods.

**E.** 1. Table given on Page-62. 2. If you observe the cut surfaces ..... in the brinjal. 3. We know that salt ..... to form the crystal. 4. Burning of wood is a chemical change. It gives off heat and gases and leaving a residue of ashes. In this process, ..... undergoes a chemical reaction. 5. Rusting of iron can be prevented by ..... to prevent rusting. 6. Activity-3 on page 65.

**F.** 1. Rusting 2. Evaporation 3. Crystals 4. Galvanisation 5. Reactant 6. Products

### **7. Weather, Climate and Adaptations of Animals to Climate**

**A.** 1. atmospheric 2. millimetres 3. torrid and frigid 4. penguin 5. Siberian cranes 6. canopy

**B.** 1. a 2. b 3. b 4. c 5. b 6. a 7. d

**C.** 1. c 2. f 3. b 4. g 5. h 6. a 7. e 8. d

**D.** 1. Weather experts use ..... as weather forecasting. 2. Relative humidity is the ..... of water vapour. 3. They are latitude, distance from the sea, ocean currents, direction of wind and humidity. Human activities also affect the climate. 4. The maximum and minimum temperatures. 5. Bharatpur in Rajasthan and Sultanpur in Haryana and some wetlands of north east and some other parts of India.

**E.** 1. Weather is the daily ..... several times a day. On the other hand, the climate refers ..... of one year. 2. Polar bears are perfectly adaptive to live in the snow cold environment of the Arctic polar region (North Pole of the Earth). They have the following adaptations: (i). Polar bears have two thick ..... a mile away (1.6 km). 3.

The penguin is mostly found in ..... like the walrus or sea lion. 4. Birds migrate to warmer ..... the purpose of breeding. Some adaptation shown by Siberian cranes ..... avoid predators. 5. Polar regions are covered ..... freezing point.

F. Do yourself

### 8. Soil

A. 1. fungi and bacteria 2. weathering 3. earthworms 4. A-horizon 5. percolation rate 6. drainage and organic

B. 1. c 2. d 3. b 4. b 5. a 6. c

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

D. 1. The topmost layer of ..... underground water reservoir. 2. The process by which huge ..... is called weathering. 3. Soil contains humus ..... the presence of humus. 4. A-horizon, B-horizon, C-horizon and R-horizon are the different layers of the soil.

E. 1. The role of water in weathering ..... elsewhere as soil. 2. Since soil is formed ..... to form humus. 3. Sandy Soil: This type of soil ..... is found in desert. Clayey Soil: It consists of very fine ..... good for growing plants. Loamy Soil: It is best topsoil ..... by the roots of plants. 4. The term 'soil profile' refers ..... composition of the soil. F. Do yourself

### 9. Respiration in Organisms

A. 1. nostrils 2. larynx 3. bronchioles, alveoli 4. breathing rate 5. respiration 6. anaerobic respiration 7. carbon dioxide

B. 1. b 2. d 3. a 4. b 5. b 6. a 7. c

C. 1. Energy is released from digested food ..... is called oxidation. 2. A process in living ..... is called respiration. 3. Breathing involves the

exchange of gases oxygen ..... is called internal respiration. 4. Equation **given on Page-89** 5. nose, pharynx, trachea, bronchi and lungs.

D. 1. Breathing is a continuous ..... called exhalation. 2. Insects such as cockroaches and ..... the smaller tubes. 3. Breathing is a physical process. Human beings ..... cavity called diaphragm. 4. Sometimes during any physical activity such as ..... relief from cramps. 5. Like other living organisms, plants also respire ..... pore to take in oxygen.

E. 1. Breathing 2. Diaphragm 3. Tracheae 4. Stomata 5. Bronchioles 6. Alveoli

### 10. Transportation in Animals and Plants

A. 1. Amoeba and paramecium 2. heart 3. hemoglobin 4. WBCs 5. kidneys 6. vascular system 7. translocation

B. 1. a 2. c 3. a 4. c 5. b 6. d 7. c

C. 1. T 2. T 3. T 4. F 5. T 6. F 7. F

D. 1. In multicellular organisms, the ..... cell in the body. 2. Red Blood Cells (RBCs), White Blood Cells (WBCs) and platelets are three types of blood cells. 3. Right auricle, left auricle, left ventricle and left auricle. 4. Urine consists of 95% water, 2.5% urea and 2.5% other waste products. 5. The inside of the heart is divided into four chambers. These chambers are separated by a wall of muscle called septum.

E. 1. Arteries are the ..... towards the heart. 2. Transport system in plants is called the vascular ..... called sieve tubes. 3. The excretory system of human beings collects the liquid wastes of the body and helps it get

rid of them. The excretory system ..... out of the body. 4. There are three types of blood cells: Red Blood Cells (RBCs): Red blood ..... prevent blood loss. 5. The heart is a fist-sized muscular organ ..... becomes oxygenated again. 6. Leaves make food ..... called sieve tubes.

F. Do yourself

### 11. Reproduction in Plants

A. 1. asexually 2. single cell 3. tissue culture 4. reproductive 5. pistil, ovary 6. nectar 7. embryo

B. 1. b 2. a 3. c 4. d 5. c 6. c 7. a

C. 1. The process through ..... reproduction. 2. The process of ..... artificial propagation. 3. papaya, watermelon, cucumber and pumpkin 4. The transfer of pollen grains from the anther to the stigma of a flower is called pollination. When the male cell and ..... form the new organisms. 5. The transfer of pollen grains ..... bisexual or unisexual flowers.

D. 1. Spore formation: Some plants ..... in a short time. 2. Cutting: In this method, ..... from the original plant. 3. Vegetative propagation is very useful to plant ..... types of reproduction. 4. After pollination, ..... into a seed. 5. Seeds which are scattered ..... along with the water current. E. Do yourself

### 12. Time and Motion

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

B. 1. c 2. a 3. c 4. d 5. d 6. a

C. 1. Time is important ..... part of our life. 2. Measurement is ..... the same kind. 3. Sand clock, sundial and water clock. 4. The time taken ..... the pendulum. 5. If the speed ..... in uniform motion.

D. 1. Sand clock: Sand clock is ..... specific time periods. 2. A simple pendulum consists ..... equal intervals of time. 3. Do yourself. 4. In ancient times, people used the foot, ..... as the SI system. 5. The distance covered ..... cover the distance.

E. 1. Motion 2. Odometer 3. Quartz 4. Speedometer 5. Oscillation

### 13. Electric Current and its Effects

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

B. 1. a 2. c 3. d 4. a 5. b 6. a

C. 1. The proper arrangement ..... an electric circuit. 2. The bulb uses ..... of the bulb. 3. There are three ..... electric current 4. Cell battery, On-off switch, Electric appliance, Conducting wires, Ammeter and Voltmeter.

D. 1. There are many components ..... difference to be measured. 2. A solenoid is a ..... a magnetic material 3. When electric current flows through a wire wound ..... solenoid several times. 4. The electric bell is a simple device that uses ..... continue producing sound.

E. Do yourself

### 14. Light

A. 1. incident 2. reflected 3. incidence 4. plane mirrors 5. Convex 6. spectrum

B. 1. a 2. b 3. c 4. b 5. d 6. b

C. 1. Light travels in ..... rectilinear propagation. 2. A mirror bounces back ..... reflection of light. 3. Uses of concave mirrors: Concave mirrors are used as reflectors ..... of the face. 4. Uses of convex mirrors: Convex mirrors are used as rear ..... over a larger area.

**D.** 1. When light falls ..... a straight line. Activity. 2. An image formed on a plane mirror ..... in front of it. 3. Sir Isaac Newton, a great scientist who lived in the seventeenth century, ..... yellow, orange and red. 4. Do yourself. **E.** Do yourself

### **15. Water: A Precious Resource**

**A.** 1. human body 2. agriculture 3. temperatures 4. surface water 5. hand pumps, tube wells 6. water scarcity 7. photosynthesis

**B.** 1. d 2. b 3. c 4. b 5. a 6. b 7. a

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

**D.** 1. Our earth is called ..... from a distance. 2. Solid, liquid and gas. 3. The upper limit of groundwater is called the water table. 4. Rainwater is the purest form of fresh ..... and condensation. 5. The continuous movement of water from the earth's ..... water cycle in nature.

**E.** 1. Water scarcity occurs ..... on the ground surface. 2. The water in water bodies ..... nature goes on.

3. The state of water can be ..... called condensation. 4. Water is very important for plant ..... death of the plant. 5. Water is a precious ..... household chores.

**F.** 1. Depletion 2. Groundwater 3. Infiltration 4. Salinity 5. Aquifer

### **16. Forests: Our Lifeline**

**A.** 1. crowns 2. canopy 3. forest floor 4. ecosystem 5. soil 6. carbon dioxide

**B.** 1. b 2. a 3. b 4. d 5. b 6. c

**C.** 1. A forest is ..... many plants. 2. Numerous species ..... in nutrients. 3. The living things ..... ecosystem in a forest. 4. Timber, wood pulp, turpentine, latex, oils, spices and resins.

**D.** 1. Not only plants help ..... process of respiration. 2. Animals depend on plants ..... respiration of living beings. 3. Forests are important for the environment ..... green lungs in nature. 4. Food chains are simple representations ..... an energy flow chain. **E.** Do yourself

### SCIENCE NATURE- 8

#### 1. Crop Production and Management

A. 1. Agriculture 2. Crop 3. Rabi 4. Loosening 5. Transplantation 6. Fumigated 7. Pisciculture

B. 1. c 2. a 3. b 4. c 5. d 6. b

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

D. 1. The branch of science that deals with growing plants and raising livestock for human use is called agriculture. 2. When a large number of plants are grown at same place for food, is called a crop. 3. When agriculture practices are carried successfully by using old or modern tools, these are known as farming implements. 4. Soil anchors the roots of plants, provides nutrients and water to them, and also provides oxygen to the roots. 5. The instrument used for ploughing is called a plough.

E. 1. Kharif crops are sown during ..... examples of rabi crops. 2. Following are the advantages of ploughing: a. ploughing makes the soil ..... decomposition make the soil fertile. 3. Crop rotation: When a crop is grown ..... atmospheric nitrogen to nitrates. 4. Irrigation means supplying water to ..... minerals are also absorbed. 5. Vegetables and fruits are preserved in cold ..... grains and ensure safe storage.

F. Do yourself

#### 2. Microorganisms: Friend and Foes

A. 1. Microorganisms 2. Bacteria 3. Protozoa 4. Algae 5. Lactose 6. Fermentation 7. Diseases

B. 1. a 2. c 3. b 4. d 5. d 6. a 7. b

C. 1. F 2. T 3. T 4. T 5. T 6. T 7. T 8. T

D. 1. Long ago, in 167, Anton van Leeuwenhoek, a Dutch ..... are also known as microbes. 2. The study of microorganisms is known as microbiology Scientists who study microorganisms are known as microbiologists. 3. Microbes can be classified widely into bacteria, protozoa, fungi, algae and viruses. 4. Viruses are the microscopic and most primitive organisms known to man. 5. The process by which a microbe breaks down carbohydrates to form acid or alcohol and carbon dioxide is called fermentation. 6. Pathogens enter our body through air we breathe, the water we drink and the food we eat.

E. 1. Microorganisms are found everywhere ..... dry deserts to marshy places. 2. Fungi are present everywhere ..... saprophytic or parasitic. 3. The characteristics of viruses are as follows: a. They are so small ..... from their host cells. 4. The process by which ..... form alcohol. 5. Microorganisms in agriculture increase soil fertility. Some ..... increase soil fertility. 6. Viruses contain pathogens ..... hepatitis and many more. 7. Some simple methods of limiting ..... given to the patient.

F. 1. Microbiology 2. Antibiotics 3. Carriers 4. Fermentation 5. Lactobacillus 6. Pathogens

#### 3. Materials: Metals and Non-Metals

A. 1. electricity 2. metallic lustre

3. malleable 4. hammering 5. copper  
6. kerosene 7. rust proofing

**B.** 1. a 2. c 3. b 4. d 5. a 6. c 7. b

**C.** 1. T 2. F 3. F 4. T 5. T 6. T 7. F

**D.** 1. All materials are ..... elements. Hydrogen, carbon, ..... as elements. 2. Sodium, potassium, aluminum and magnesium. 3. Metals are generally shiny, ..... uranium and zinc. On the other hand, non-metals do not conduct heat or electricity ..... and bromine. 4. All the metals react ..... sodium and potassium. 5. Sulphur is used in ..... dyes and gunpowder. 6. Copper and ..... factory equipment.

**E.** 1. Metals and non-metals can be identified on the basis of their appearances and other physical properties ..... melting and boiling points. 2. Activity-2. on page 33. 3. There are several ways of ..... as stainless steel. 4. Like sodium oxide and potassium oxide, ..... or non-metal. Potassium + Oxygen ..... Potassium oxide Magnesium + Oxygen ..... Magnesium oxide 5. When a metallic salt solution ..... metals place below.

$\text{CuSO}_4(\text{aq}) + \text{Fe}(\text{s}) \rightarrow \text{FeSO}_4(\text{aq}) + \text{Cu}(\text{s})$  **F.** Do yourself

#### **4. Combustion and Flame**

**A.** 1. b 2. e 3. f 4. g 5. c 6. d 7. a

**B.** 1. c 2. b 3. c 4. b 5. d 6. a 7. a

**C.** 1. Combustion is defined as the ..... carbon dioxide. 2. A substance that burns in air (oxygen) to produce heat ..... of non-combustible substance. 3. A sudden reaction with ..... application of pressure. 4. The amount of heat liberated when unit mass ..... its calorific value. 5. The lowest

temperature ..... than their ignition temperature. 6. Solid fuels, liquid fuels and gaseous fuels are the three types of fuels in nature.

**D.** 1. Fuels can be classified on ..... millions of years to form. 2. The conditions necessary for ..... fire (Ignition Temperature). 3. Complete combustion takes place ..... there are remnants of ash. 4. The simplest fire extinguisher is the soda-acid ..... is produced. 5. Non-luminous zone: The luminous zone is surrounded ..... least hot part of the flame.

**E.** Do yourself

#### **5. Conservation of Plants and Animals**

**A.** 1. biodiversity 2.  $\text{CO}_2$ ,  $\text{O}_2$  3. soil erosion 4. endangered 5. endemic 6. biosphere 7. wildlife

**B.** 1. a 2. b 3. a 4. d 5. c 6. a 7. b 8. a

**C.** 1. F 2. T 3. T 4. F 5. T 6. T 7. F

**D.** 1. Biodiversity can be defined ..... in an area. 2. Plants and animals together maintain ..... silk, lac and gum. 3. The plants found in a ..... called fauna of that area. 4. A great variety of plants and animals ..... protecting valuable resources. 5. Natural and human activities ..... freezing temperature. 6. Grazing animals eat young ..... and trunks. 7. Replanting of new ..... is also called afforestation.

**E.** 1. Every component of biodiversity serves ..... force of wind and water. 2. Deforestation has the following ..... rainfall and drought. 3. Trees are cut down (deforestation) for ..... petroleum and ores. 4. A wildlife sanctuary is a protected area ..... Bandipur Wildlife Sanctuary. On the other hand, a biosphere is that part of the earth ..... (encompasses



Tamil Nadu, Kerala and Karnataka). 5. In the Red Data Book, species are classified ..... threat of extinction. 6. Due to illegal trade ..... is called poaching. 7. There are three levels of endangerment- threatened, ..... called vulnerable species. **F. Do yourself**

### **6. Cell- Structure and Functions**

**A.** 1. transparent, colourless 2. storage 3. nerve cell 4. cytoplasm 5. chromosomes 6. prokaryotic 7. dictyosome

**B.** 1. a 2. b 3. b 4. d 5. c 6. a 7. a 8. b

**C.** 1. T 2. T 3. T 4. F 5. T 6. T 7. F

**D.** 1. The basic structure unit of an organ. 2. Cell membrane is permeable and allows water, ..... shape to the cell. 3. Chromosomes contain the ..... resembles its parents. 4. Organisms such as amoeba, ..... or trillion cells. 5. The endoplasmic reticulum is a ..... support to the cytoplasm.

**E.** 1. In 1838, two German biologists ..... interaction of its cells. 2. Robert Hooke was the first ..... appearance of a honeycomb. 3. Cells exist in different shapes. They may be flat, ..... function it performs. 4. Based on the type of nucleus, a cell ..... examples of prokaryotic cells.

**F.** 1. Mitochondria 2. Vacuoles 3. Organelle 4. Cytoplasm 5. Dictyosome 6. Plastids 7. Genes

### **7. Reproduction in Animals**

**A.** 1. gametes, zygote 2. embryo 3. external 4. reproductive system 5. scrotal sac 6. sperms, vagina 7. ovum, oviduct

**B.** 1. b 2. c 3. a 4. b 5. a 6. d 7. a 8. c

**C.** 1. c 2. d 3. a 4. f 5. g 6. e 7. b

**D.** 1. The process by which an organism is able to produce more of its own kind is known as reproduction. 2. Reproduction is very important

..... a stage when it can reproduce. 3. The animals which give birth ..... development is complete. 4. In a hen, internal fertilisation ..... egg and hatches. 5. If the ovum is not fertilised by a sperm, ..... as menstruation. 6. In sexual intercourse, the male transfers sperms ..... a new individual.

**E.** 1. Another method of asexual ..... individuals is called binary fission. 2. In the specie of hydra, ..... called budding. 3. In external fertilisation, the fusion of male and ..... cat and also human beings. 4. Fertilisation results in the formation of zygote ..... fully-formed baby. 5. The male reproductive system includes a pair of testes. They are ..... the female's body.

**F. Do yourself**

### **8. Reaching the Age of Adolescence**

**A.** 1. sexual maturity 2. adolescence 3. puberty 4. female 5. thyroxin 6. diabetes 7. menstruation

**B.** 1. a 2. b 3. c 4. d 5. a 6. b 7. c

**C.** 1. T 2. F 3. T 4. F 5. T 6. T 7. T

**D.** 1. The stage of life ..... as puberty. 2. On an average, girls ..... person to person. 3. Apart from sex hormones, ..... the master gland. 4. The most visible change during puberty ..... body parts for growth. 5. Lack of sufficient insulin causes diabetes. 6. The World Health Organisation (WHO) defines adolescence as ..... secondary sexual characteristics.

**E.** 1. During adolescence the body undergoes ..... eggs every month. 2. Apart from sex hormones, ..... condition called dwarfism. 3. In females, the reproductive phase ..... is controlled by hormones. 4. Good

nutrition, proper exercise and rest, ..... excellent ways to exercise. 5. Hormones can be present in animals as ..... cannot become adult frog.

F. Do yourself

### 9. Force and Pressure

A. 1. chapattis 2. gravity 3. non-contact force 4. Sir Isaac Newton 5. pressure gauge 6. higher pressure 7. electrostatic

B. 1. b 2. a 3. c 4. d 5. a 6. b

C. 1. e 2. d 3. f 4. c 5. b 6. a

D. 1. A body cannot start ..... get in and so on. 2. Pressure in Pascal = Force in Newton/Area in metre square. 3. If you immerse the funnel ..... pressure increases with depth. 4. The layer of air which is present ..... column above it. 5. While playing football ..... the ball. 6. The formula for pressure is: Pressure = Force / Area. From the formula ..... the pressure increases.

E. 1. When applied on an object, force ..... without the action of a force. 2. (a). The force exerted by a charged ..... another charged body. (b). Every object in the universe ..... of the force of gravity. 3. An instrument used to measure pressure is ..... pressure increases with depth. 4. Take a plastic ..... all the directions. 5. Pressure is inversely ..... it a greater stability.

F. 1. Motion 2. Barometer 3. Force 4. Manometer 5. Pascal 6. Pressure

### 10. Friction

A. 1. irregularities 2. rolling friction 3. nuisance, minimum 4. machinery, automobiles 5. steel, steel surfaces 6. streamlined 7. Gymnasts 8. machines

B. 1. b 2. a 3. b 4. c 5. c 6. a 7. b 8. b

C. 1. F 2. T 3. T 4. F 5. T 6. T 7. T 8. F

D. 1. Roll a ball on the .....

called the force of friction. 2. When you push a heavy box, it does not ..... moving the box difficult. 3. A surface offers friction because of ..... offers more friction. 4. A shape which is ..... through fluids.

E. 1. It will not be possible ..... the absence of friction. 2. Friction causes the moving parts ..... the machine reduces. 3. The force which opposes the motion when the ..... examples of sliding friction. On the other hand, the force which opposes the motion ..... make the movement easier. 4. There are certain situations when ..... to improve their grip. Friction reduces the speed of a moving object, ..... and the board.

F. Do yourself

### 11. Sound

A. 1. vibration 2. voice box, windpipe 3. oscillations, frequency 4. amplitude 5. combination 6. infrasonic 7. auditorium

B. 1. b 2. b 3. c 4. a 5. d 6. a 7. a 8. b

C. 1. T 2. T 3. F 4. F 5. F 6. T 7. T

D. 1. When an object vibrates, ..... our ears as a sound. 2. The time taken for the pendulum ..... measured in seconds. 3. Bats and some other ..... as infrasonic sounds. 4. The maximum distance ..... of the oscillation. 5. In humans, the sound is ..... make different sounds. 6. Bats have large ears that are very ..... has a good meal.

E. 1. A simple pendulum consists ..... complete one oscillation. 2. Our ears are sensory organs ..... register the sound. 3. Quality or timbre describes those characteristics of ..... in their waveforms. 4. Stringed instruments: They are instruments in which ..... violin and sarod. Wind instruments: They are instruments in

which ..... shehnai and trumpet. Percussion instruments: They are instruments in which ..... dholak and mridangam. 5. Noise can affect ..... blood pressure and heart problems. 6. To control noise, we need to ..... the impact of noise. 7. Loud and excessive sound ..... producing loud noise.

F. Do yourself

### **12. Chemical Effects and Electric**

#### **Current**

A. 1. stationary 2. orbits 3. neutral 4. electrolytes 5. Electroplating 6. silver, gold 7. electroplating

B. 1. c 2. a 3. c 4. a 5. b 6. c 7. a

C. 1. c 2. g 3. d 4. e 5. f 6. b 7. a

D. 1. electrons, protons and neutrons particles. 2. The uninterrupted, ..... as electric circuit. 3. When electric current is ..... called the chemical effect of electric current. 4. The liquids which conduct ..... electricity are non-electrolytes.

E. 1. An atom is made up of ..... through a conductor. 2. Electroplating is one of the chemical effects ..... chromium on them. 3. When an electric current is passed ..... is called electrolysis. 4. Electroplating has many benefits ..... rims and many others.

F. Do yourself

#### **13. Light**

A. 1. ciliary muscles 2. incident ray 3. normal 4. light 5. mirrors 6. focusing 7. concave 8. optical nerve

B. 1. a 2. b 3. c 4. d 5. a 6. b 7. b 8. c

C. 1. T 2. T 3. F 4. T 5. F 6. F 7. T 8. F

D. 1. Reflection is defined ..... polished surface. 2. First Law of Reflection: The incident ray, .....

reflection,  $\angle i = \angle r$ . 3. The main use of a periscope ..... of the water. 4. A kaleidoscope is a ..... form beautiful designs. 5. The surfaces of most objects around ..... reflects light in this way.

E. 1. The eye is a natural optical ..... formed on the retina. 2. The formation of the image behind ..... with concave lenses. 3. Some features of image formed by a plain mirror: Size: Look at ..... displays lateral inversion. 4. Luminous objects are those that ..... see objects around us. 5. When two or more mirrors ..... seen when you visit a hair cutting salon.

F. Do yourself

### **14. Stars and The Solar System**

A. 1. astronomers 2. Alpha Centauri 3. constellation 4. Little Dipper 5. North, South 6. Uranus 7. asteroids 8. Sputnik-1

B. 1. b 2. a 3. c 4. c 5. d 6. a 7. c 8. d

C. 1. d 2. c 3. e 4. f 5. b 6. a

D. 1. F 2. T 3. T 4. F 5. T 6. F 7. T 8. F

E. 1. The universe ..... called celestial bodies. 2. A light year is ..... large distance. 3. Saturn is often called ..... the help of a telescope. 4. This is the only planet where life ..... form to be created. 5. When a small object from the space reaches ..... are called meteorites. 6. Sailors and ..... during night.

F. 1. Stars are seen in ..... shining across the sky. 2. A comet is a celestial body which ..... appear again in 2062. On the other side, there is a large gap between the orbits ..... asteroid is Ceres (diameter

1000 km). 3. The moon appears to change ..... all over again. 4. One of the most ..... summer season. 5. Artificial satellites are sent for ..... been launched by ISRO.

**G. Do yourself**

**15. Pollution of Air and Water**

**A.** 1. smoke, carbon monoxide  
2. eutrophication 3. Ganga 4. pollutants  
5. gasoline 6. greenhouse 7. industrial effluent 8. 1985

**B.** 1. a 2. d 3. b 4. b 5. b 6. a 7. c 8. b

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

**D.** 1. T 2. F 3. T 4. T 5. F 6. T 7. F 8. T

**E.** 1. Air pollution occurs when ..... humans, animals and plant. 2. suspended particulate matter. It consists of ..... vapour. 3. The case of the Taj Mahal is a reminder ..... marble of the Taj Mahal. 4. Carbon dioxide and methane 5. Boiling and addition of chlorine tablet

6. Water which is fit for drinking is called potable water.

**F.** 1. Air pollution can result from ..... natural air pollutants. 2. Greenhouse gases trap ..... to global warming. 3. Another effect of air ..... some species of fishes. 4. Purification of water in ..... city and town. 5. Smog is a combination of ..... harms the environment. 6. When toxic substances enter lakes, ..... affecting aquatic ecosystems. Domestic sewage: The main organic materials are ..... technical problem. Agricultural runoff: The use of land for agriculture ..... life in the water bodies. 7. The following methods can be used to purify water at homes. Boiling: This is the ..... are called RO filters.

**G.** 1. Pollution 2. Lead 3. Chlorination  
4. Pollutants 5. Smog