

# Exploring Science (Teachers' Manual)

## SCIENCE-1

### Unit-1 : Human Body

#### 1. Our Sense Organs

A- 1. Nose, ears, skin, eyes, tongue. 2. see, smell, hear, taste, touch. 3. to smell 4. to see.

B- 1. (✓) 2. (X) 3. (✓) 4. (X)

C- 1. touch 2. smell 3. taste 4. hear.

#### 2. Our Basic Needs

A- 1. Fresh food 2. To make body strong and healthy 3. For good health 4. From heat and cold.

B- 1. (✓) 2. (✓) 3. (X) 4. (X)

C- 1. air 2. winter 3. house 4. food

#### 3. Good Habits

A- 1. Take a bath daily, get up early in the morning 2. keep ourselves neat and clean, obey our teachers.

B- 1. bags 2. neat and clean 3. proper 4. jump

C- 1. proper place 2. neat and clean 3. class teacher 4. everyday.

#### 4. Keep Your Body Fit

A- 1. To over come tiredness 2. About 8 to 10 hours 3. swimming, running 4. Brush your teeth, keep hands clean, take bath daily, wear clean clothes, keep nails clean, comb your hair.

B- 1. (✓) 2. (X) 3. (✓) 4. (✓)

C- 1. bath soap 2. tooth paste 3. tooth brush 4. hair oil.

### Unit II : Our Sweet Home

#### 5. A Home to Live In

A- 1. From cold, heat and rain 2. Storeroom 3. Kitchen 4. Mother.

B- 1. (✓) 2. (X) 3. (✓) 4. (X)

C- 1. is used for sleeping 2. is used for making food 3. is used to attend our guests and watch TV 4. is used for bathing.

### Unit III : Air, Water and Weather

#### 6. The Air

A- 1. To keep alive 2. very fast air 3. Blow air in balloon 4. Fly kite clothes dry, burning.

B- 1. (X) 2. (✓) 3. (✓) 4. (X)

#### 7. The Water

A- 1. Rivers, ponds, well 2. By boiling, filtration 3. Bathing, washing, cooking, drinking 4. Not possible.

B- 1. (✓) 2. (X) 3. (X) 4. (✓)

C- 1. water 2. clean water 3. from the river 4. to wash

the clothes

#### 8. The Weather

A- 1. Hot days 2. Rainy days 3. Cold days 4. Windy days

B- 1. in hot days 2. in rainy days 3. in cold days

### Unit IV : Our Universe

#### 9. The Sun, Moon and Stars

A- 1. in the morning 2. no 3. Neil Armstrong 4. no

B- 1. east 2. sky 3. spacecraft 4. every night

C- 1. (X) 2. (✓) 3. (X) 4. (✓)

### Unit V : Plants World

#### 10. Plants Around Us

A- 1. trees 2. leaves 3. thorny plants 4. climber.

B- 1. sizes, shapes 2. climbers 3. rose 4. leaves

C- 1. (X) 2. (✓) 3. (X) 4. (X)

D- 1. thorny plant 2. medium plant 3. climbers.

#### 11. Plants and Seeds

A- 1. seed 2. mango, litchi 3. rose, jasmine 4. pomegranate plant.

B- 1. (X) 2. (✓) 3. (X) 4. (✓) 5. (X)

C- 1. one seeded fruit 2. many seeded fruit 3. sweet smell 4. seeds.

#### 12. Plants and Seeds

A- 1. carrot, turnip, radish 2. coriander, spinach, cabbage.

B- Do yourself.

### Unit VI : Animals World

#### 13. About The Animals

A- 1. lion, bear 2. cow, dog 3. donkey, buffalo, monkey 4. giraffe.

B- 1. (X) 2. (✓) 3. (X) 4. (✓)

C- 1. short animals 2. tall animals 3. pet animals 4. wild animals.

#### 14. Animals Houses

A- 1. protect from sun, rain, cold and enemies 2. sparrow, pigeon 3. monkey, fish 4. cow, horse.

B- 1. (X) 2. (✓) 3. (X) 4. (✓)

C- 1. den 2. nest 3. made by man 4. stables 5. burrows

#### 15. Animals Food

A- 1. dear, cow 2. lion, snake 3. mouse, squirrel, cock 4. bear, crow.

B- 1. (✓) 2. (X) 3. (X) 4. (✓)

C- 1. flesh 2. grain 3. insect 4. both flesh and plants.

## 16. Birds, Fish, and Insects

A- 1. parrot pigeon 2. duck, swan 3. ostrich, penguin

B- 1. (✓) 2. (X) 3. (X) 4. (✓)

C- 1. can fly 2. swim on the water 3. cannot fly  
4. insect

## Unit VII : Safety Rules

### 17. Safety Rules At Various Places

A- 1. to be safe 2. walk on footpath, cross road at zebra crossing, don't play fire 3. open field 4. zebra crossing.

B- 1. (✓) 2. (X) 3. (✓) 4. (X)

C- 1. an open field 2. while crossing the road 3. fire  
4. safe games.

## **SCIENCE-2**

### Unit-I : Atmosphere Around Us

#### 1. Living and Non-living Things

A-1. Natural things 2. man-made things 3. which have life and which have not life 4. Sun, river.

B- 1. (✓) 2. (X) 3. (✓) 4. (✓)

C- 1. non-living thing 2. food 3. nature 4. babies  
5. plants.

#### Unit II : Human Body

##### 2. Our Bones and Muscles

A- 1. stomach, tongue 2. 206 bones, 500 muscles  
3. bones 4. muscles are fleshy

B- 1. (✓) 2. (X) 3. (✓) 4. (X)

C- 1. gives proper support and shape to our body  
2. are soft 3. bones in our body 3. covers our body.

##### 3. Food For Healthy Body

A- 1. to stay alive 2. fruits and vegetables 3. dal, milk, vegetables 4. food.

B- 1. (X) 2. (✓) 3. (X) 4. (✓)

C- 1. before and after having your meal 2. at a clean place 3. slowly and properly 4. Uncovered food.

##### 4. Exercises and Postures

A- 1. keep our body healthy 2. playing, walking, running 3. way to sit, stand or walk 4. back straight, chest up.

B- 1. (✓) 2. (X) 3. (✓) 4. (✓)

C- 1. are good exercises 2. keep your back straight 3. erect 4. swing your arms freely.

#### Unit III : Sweet Home

##### 5. Houses

A- 1. bricks, stones, wood, steel, cement etc. 2. tent  
3. kuchcha house (huts) 4. house on wheel.

B- 1. (✓) 2. (X) 3. (✓) 4. (X)

C- 1. is a permanent house 2. is a house of snow 3. is a house on water 4. is not a permanent house.

## Unit IV : Air and Water

### 6. The Air

A- 1. combination of gases 2. air free pollution, by planting trees 3. moving air, very fast wind 4. move sail boat, wind mill, helps in plantation.

B- 1. (✓) 2. (X) 3. (✓) 4. (X)

C- 1. germs and smoke 2. our health 3. storm  
4. direction.

### 7. Water and Its Uses

A- 1. to stay alive 2. collecting rain water and avoid wastage 3. rains, ponds, rivers, hand pump 4. make us ill.

B- 1. (X) 2. (✓) 3. (X) 4. (✓)

C- 1. for all living things 2. main source of water  
3. from well 4. fit for drinking.

### Unit V : Plant World

#### 8. Plants

A- 1. mango tree, banyan tree 2. **Shrubs**-small plant and hard stem, **Herbs**- soft stem 3. pea, grapevine  
4. rose, cactus, bougainvillea.

B- 1. (✓) 2. (✓) 3. (X) 4. (X)

C- 1. i straight plant 2. is a shrub plant 3. is a thorny plant 4. is a creeper.

#### 9. Plants and Their Uses

A- 1. **Vegetables**-carrot, cabbage, radish, **Fruits**-apple, mango, grapes 2. cotton, jute, rubber trees  
3. tulsi, garlic, mint 4. plants give us food, medicine and other things.

B- 1. (✓) 2. (X) 3. (✓) 4. (✓)

C- 1. sugarcane 2. radish and carrot 3. cabbage  
4. tulsi and neem

### Unit VI : Animal World

#### 10. Types of Animals

A- 1. cow, buffalo, goat 2. cat, dog 3. lion, tiger, snake 4. horse, camel, elephant, donkey.

B- 1. (X) 2. (✓) 3. (X) 4. (✓)

C- 1. is a pet animal 2. give us milk 3. flesh eating animals 4. load carrying animals.

#### 11. Birds

A- 1. Ostrich, penguin, canary 2. the strong arms and chest muscles 3. trees 4. bird feed their babies.

B- 1. feathers 2. three 3. eggs 4. fly.

C- 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (X)

### Unit VII : Our Universe

#### 12. The Sun

A- 1. A big ball of hot gases 2. round in shape  
3. something comes in the way of light 4. round bodies of glowing gases, no.

B- 1. (✓) 2. (X) 3. (✓) 4. (✓)

C- 1. is a hot ball of gases 2. has a round shape 3. are the round bodies of glowing gases 4. is very short at noon.

### **13. Rocks, Soils and Minerals**

A- 1. marble, sand stone 2. talc, graphite 3. made up of breaking rocks 4. hardest mineral.

B- 1. (X) 2. (✓) 3. (✓) 4. (X)

C- 1. is a hard rock 2. is a soft mineral 3. is made from graphite 4. is made up of limestone.

### **14. Our Earth**

A- 1. round like a sphere 2. the side of the Earth towards the sun has day 3. far away from the Earth 4. Earth moves towards east.

B- 1. (✓) 2. (X) 3. (✓) 4. (✓)

C- 1. sphere shape 2. many times bigger than the Earth 3. Sun rises 4. Sun sets.

### **Unit VIII : Safety Rules**

#### **15. Safety Rules and First Aid**

A- 1. walk on the footpath, cross the road at zebra crossing 2. Be caring and loving pet 3. first help given to injured person 4. to relief injury person.

B- 1. (✓) 2. (✓) 3. (✓) 4. (✓)

C- 1. footpath 2. at zebra crossing 3. game 4. first aid.

### **SCIENCE-3**

#### **Unit-I : The Human Body**

##### **1. Our Body**

A-1. made up of cells 2. bones-206, muscles more than 500 3. group of cells 4. The sense organs help us to know the world. Skin, eyes, nose, ears and tongue 5. digestion of food, circulation of blood.

B- 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (X)

C- 1. food, water and air 2. cells 3. organ 4. cells 5. nervous.

D- 1. five 2. 206 3. more than 500 4. brain 5. kidney.

#### **Unit II : Types of Houses**

##### **2. Our & Homes**

A- 1. big, strong, airy and well-lit 2. swept and mopped everyday 3. to live in 4. to carry dirty water away from the house 5. bungalow, houseboat, flat, hut.

B- 1. (X) 2. (✓) 3. (X) 4. (X) 5. (✓)

C- 1. house 2. sunlight 3. a clean house 4. covered 5. clean.

D- 1. animals 2. space 3. light 4. air 5. water 6. planned 7. washed.

### **Unit III : Soil, Water and Weather**

#### **3. Soil**

A- 1. by the breaking up of the rocks 2. Humus is made up of rotten leaves and decayed bodies of animals and plants 3. humus, clay, sand and stone 4. gravel, sandy, clayey and loamy soil 5. It contains air, water and humus.

B- 1. (X) 2. (X) 3. (✓) 4. (✓) 5. (X)

C- 1. soil 2. clayey soil 3. water, mineral salts 4. sand clay 5. humus.

D- 1. rocky soil 2. sea shore 3. fine grains 4. humus 5. light soil

#### **4. Water**

A- 1. tasteless, colourless and odourless 2. no life without water 3. solid, liquid and gas 4. circulation of water in atmosphere.

B- 1. three 2. 3/4 3. liquid 4. plants 5. water vapour.

C- 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (X)

D- 1. water changed into ice 2. change of liquid into vapour 3. ice changed into liquid 4. fixed shape 5. evaporation.

#### **5. Weather and Its Effects**

A- 1. change of season 2. at noon due to the sun overhead 3. the advance information 4. clothes, food and many other things 5. sun, wind, clouds and rain.

B- 1. weather 2. noon 3. moving 4. weather 5. woollen.

C- 1. (✓) 2. (X) 3. (X) 4. (X) 5. (X)

D- 1. umbrella 2. cotton clothes 3. woollen clothes 4. warm 5. newspaper and TV.

#### **6. Our Environment**

A- 1. every things that is around us 2. because our surrounding are dirty, we may fall ill 3. causes diseases 4. minimize pollution 5. for our future use.

B- 1. environment 2. healthy 3. malaria 4. drainage 5. flies and mosquitoes.

C- 1. (X) 2. (X) 3. (X) 4. (✓) 5. (X)

D- 1. fresh air and pure water 2. our surroundings clean 3. in standing water 4. are important to us 5. a pollution check.

#### **Unit IV : About The Plants and Animals**

##### **7. Common In Plants and Animals**

A- 1. Animals can move but plants cannot move 2. plants breathe through pores, while animals breath through lungs 3. five 4. animals can move about freely, plants are fixed on the ground 5. plants and animals depend on each other.

B- 1. food 2. plant, flesh 3. air 4. sense 5. pores.

C- 1. (✓) 2. (X) 2. (✓) 3. (✓) 4. (✓) 5. (X)

D- 1. can reproduce 2. sense organs 3. flesh of other animals 4. air 5. freely.

### **8. Parts of Plants**

A- 1. roots 2. stem 3. keep the plants stand in the ground firmly tap root, fibrous root 4. leaves are green. It makes food for the plant. 5. stems carry water and nut rents taken up by the roots to the leaves. Banyan and peepal.

B- 1. parts 2. flowers 3. leaves 4. root 5. seed

C- 1. (✓) 2. (X) 3. (✓) 4. (X) 5. (✓)

D- 1. lettuce 2. carrot 3. rose 4. sugarcane 5. mango

### **9. Food Habits and Homes of Animals**

A- 1. To stay alive 2. herbivores 3. eat the flesh of other animals 4. animals eat both and flesh 5. chewing food by ruminant.

B- 1. plant, flesh 2. elephant 3. carnivoroos 4. different 5. different.

C- 1. (X) 2. (X) 3. (✓) 4. (✓) 5. (X)

D- 1. herbivorous animal 2. carnivorous animal 3. to eat and drink 4. omnivorous animal 5. seed.

### **10. Birds : Homes and Eating Habits**

A- 1. safe from enemies and bad weather 2. grass, feathers, paper, leaves and many other things 3. pigeons, peacocks 4. sparrow, pigeon 5. crow.

B- 1. nest 2. live, lay 3. large, leaves 4. snow 5. crow's.

C- 1. (✓) 2. (X) 3. (✓) 4. (X) 5. (✓)

D- 1. curved and hooked beak 2. short and hard beak 3. sharp beak 4. long and slender beak 5. colourful beak.

### **11. Birds and Their Young Ones**

A- 1. Bone structure, feathers 2. by wing 3. changing direction 4. water birds 5. birds catch their food and protect themselves with their claws.

B- 1. boat shaped 2. baby 3. claws or feet 4. protect, claws 5. direction.

C- 1. (✓) 2. (X) 3. (✓) 4. (✓) 5. (X)

### **Unit V : Our Universe**

#### **12. Solar System and The Earth**

A- 1. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune 2. railing ship, Earth's photographs taken from the space 3. round 4. due to rotation of Earth 5. 150 million km., about 5 billion years.

B- 1. beautiful planet 2. small 3. 24 4. Sun 5. Sun.

C- 1. (X) 2. (X) 3. (✓) 4. (X) 5. (✓)

D- 1. is a ball of burning gases 2. is the part of solar system 3. it is a beautiful planet 4. they are every where 5. day and night.

### **13. Space and Gravity**

A- 1. attraction of the earth 2. Planets and stars 3. Yuri Gagarin 4. Neil Armstrong 5. 3kg.

B- 1. gravitational 2. gravity 3. strong 4. spacecrafts 5. spacecrafts Apollo II.

C- 1. (✓) 2. (X) 3. (✓) 4. (X) 5. (✓)

D- 1. have a force of gravity 2. pulls everything to wards it 3. first human to go into the space 4. first man to step on moon 5. space craft went to moon.

### **Unit VI : Measurement**

#### **14. Measurement**

A- 1. inches, millimetres, centimetres 2. do yourself 3. gram and kilogram 4. do yourself 5. litres and millilitres.

B- 1. scales 2. measurement 3. gram, kilogram 4. volume liters 5. degrees.

C- 1. (X) 2. (✓) 3. (✓) 4. (X) 5. (✓)

D- 1. 300 seconds 2. 2 litres 3. 5 kilometres 4. 4 metres 5. 1/2 kilolitre.

### **Unit VII : Safety Rules**

#### **15. Safety Rules**

A- 1. You may slip and get injured 2. **on road**- walk on footpath, cross at zebra crossing **At home**-be careful using knives, never touch electric switch, **on playground**-do not fight, follow the rules of games 3. first help given to injured person 4. take him to the doctor 5. it get injured.

B- 1. accident 2. footpath 3. classroom 4. fight 5. safty 6. first aid.

C- 1. (X) 2. (✓) 3. (X) 4. (X) 5. (✓)

### **SCIENCE -4**

#### **Unit-I : About The Living Things**

##### **1. Characteristics Of Living Things**

A-1. living things can reproduce, grow, move but non living thins cannot 2. The surface of a leaf has pores 3. presence of sunlight, water and carbon dioxide 4. living things can reproduce, breathe and move 5. Non-living things have not sense organs.

B- 1. characteristics 2. oxygen 3. living things 4. grow 5. stomata.

C- 1. (X) 2. (✓) 3. (X) 4. (X) 5. (X)

D- 1. human 2. books 3. food 4. human 5. five.

##### **2. Plant and Their Food**

A- 1. plants need carbon dioxide to prepare food which they get from animals 2. stored food is used some days there is no sun light or water 3. stomata 4. they get their food from dead plants and animals 5. to protect both animal and plant life.

**B-** 1. roots 2. chlorophyll 3. lower 4. carbon dioxide  
5. animals, plants.

**C-** 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (X)

**D-** 1. roots 2. photosynthesis 3. no 4. no 5. red leaves

### **3. Plants on Various Land and Water**

**A-** 1. conical shape 2. desert plants 3. Aquatic plants grow in water, desert plants with out leaves  
4. Breathing roots come out of the soil 5. eat insects for their food.

**B-** 1. aquatic 2. long 3. terrestrial plants 4. thick  
5. desert.

**C-** 1. (✓) 2. (✓) 3. (✓) 4. (X) 5. (✓)

**D-** 1. terrestrial 2. fine 3. cactus 4. hydrilla  
5. insectivorous plant

### **4. Reproduction in Animals**

**A-** 1. The process by which animals and plants able to reproduce young ones 2. Animal can give birth to babies 3. birds, fishes 4. albumen.

**B-** 1. caterpillar 2. water 3. parents 4. mammals.

**C-** 1. (✓) 2. (X) 3. (X) 4. (✓)

**D-** 1. reproduction 2. mammals 3. nymph  
4. caterpillar

### **5. Adaptation in Animals**

**A-** 1. The adjusment of an animal and plant to its surroundings for its living 2. The animal that live on the land 3. aquatic animals live in water, amphibians live in both water and land 4. light bones and wings  
5. animals that live on the trees.

**B-** 1. terrestrial 2. adaptation 3. herbivores 4. land  
5. trees.

**C-** 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (✓)

**D-** 1. amphibians 2. aerial 3. herbivores 4. crow, bear  
5. leeches, lice.

### **6. Care of Plants and Wild Animals**

**A-** 1. Protect from het, cold, moisture, diseases  
2. cutting down of forest, planted trees 3. oxygen and food supplies affected 4. protected from fire, ban on cutting trees 5. can not stay alive, no.

**B-** 1. oxygen 2. diseases 3. trees 4. deforestation 5. plants.

**C-** 1. (✓) 2. (✓) 3. (✓) 4. (X) 5. (✓)

**D-** 1. mango, potato 2. insecticides 3. Madhya Pradesh 4. oxygen.

## **Unit II : Human Body**

### **7. Food and Nutrition**

**A-** 1. eatable items, to get energy. 2. proteins, vitamins, carbohydrate 3. body building food. We need it for growth and repair of body. 4. Diet is the quantity of food to eat 5. Carbohydrates, Fats,

Proteins, Vitamins and minerals.

**B-** 1. energy 2. oesophagus 3. large intestine  
4. energy 5. new cells.

**C-** 1. (✓) 2. (X) 3. (✓) 4. (✓) 5. (✓)

**D-** 1. food 2. body budding food 3. oesophagus  
4. carbohydrates 5. Proteins.

### **8. Teeth**

**A-** 1. Crown, neck and root 2. four types 3. brush your teeth everyday 4. we do not take proper care  
5. enamel.

**B-** 1. two 2. temporary teeth 3. incisors 4. your teeth  
5. sweets.

**C-** 1. (X) 2. (✓) 3. (X)

**D-** Do yourself.

### **9. The World of Microbes**

**A-** 1. Very tiny organism 2. four types 3. Keep our body and surroundings clean and germ free 4. Keep our cooking and eating places clean 5. It makes bread or idles fluffy and soft.

**B-** 1. microscope 2. oldest 3. multiply 4. microbes  
5. sterilization.

**C-** 1. (X) 2. (X) 3. (✓) 4. (X) 5. (✓)

**D-** 1. preservation 2. sterilization 3. four  
4. antiseptic 5. Amoeba.

**E-** 1. Pneumonia 2. viral fever 3. malaria 4. ring worm

## **Unit III : Clothes, Weather and Soil**

### **10. Clothes**

**A-** 1. They protect us from dust, heat, cold rain and germs 2. cotton, they absorb sweat easily 3. washed and ironed 4. two types of clothes-cotton and woollen 5. woollen, they keep us warm.

**B-** 1. three 2. dust, heat, germs 3. cold 4. detergent  
5. appropriate sunlight.

**C-** 1. (✓) 2. (X) 3. (X) 4. (X) 5. (✓)

**D-** 1. winter 2. Rainy 3. cotton 4. silver fish.

### **11. Weather and Water**

**A-** 1. The changing conditions of the atmosphere  
2. land breeze air flowing to the land from sea, sea breeze air flowing to the see from the land 3. water change into water vapour 4. the change of water vapour into water 5. sedimentation decantation and filtration.

**B-** 1. noon 2. wind 3. pressure 4. water, Earth's  
5. water, drink.

**C-** 1. (X) 2. (✓) 3. (✓) 4. (✓) 5. (✓)

**D-** 1. land breeze 2. Evaporation 3. sea breeze  
4. filtration 5. hails.

## 12. Soil Erosion and Conservation

A- 1. Carrying away of soil by natural forces  
2. plants and many animals live and grow in the soil  
3. crust, mantle, outer core, Inner core  
4. protection of soil from being blown away  
5. wind carries the soil away.

B- 1. important  
2. natural forces  
3. topsoil  
4. silt  
5. hill slopes.

C- 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (✓)

D- Do yourself.

## Unit IV : The Universe

### 13. Stars and Plants

A- 1. All the eight planets together with Sun  
2. a thick blanket of air  
3. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune  
4. planets rotate on their path  
5. A satellite is a heavenly body that revolves around the Earth.

B- 1. hot glowing  
2. two  
3. fire  
4. atmosphere  
5. contains.

C- 1. (X) 2. (✓) 3. (X) 4. (X) 5. (✓)

D- 1. eight  
2. four  
3. 71%  
4. Jupiter  
5. Venus.

## Unit V : Safety Rules and First Aid

### 14. Safety Rules and First Aid

A- 1. always follow the traffic rules  
2. Safety from fire and electric shocks  
3. (a) never scatter toys  
(b) keep floors clean and dry  
(c) walk carefully on the stairs  
4. the immediate physical and medical help given to an injured person  
5. cotton, bandage, antiseptic soap, scissors, savlon.

B- 1. carelessness  
2. safety  
3. handling  
4. panic  
5. breaking.

C- 1. (✓) 2. (✓) 3. (X) 4. (X) 5. (X)

D- Do yourself.

## Unit VI : Matter, Energy and Force

### 15. States of Matter

A- 1. Matter has weight and occupies space. Solid, liquid, gas  
2. solids have definite shape. Liquids have no definite shape  
gases have no fixed volume or shape  
3. Mixture of a substance dissolved in another. Solvent in the dissolving substance  
4. soluble matter can dissolve, insoluble can not dissolve  
5. Solid has definite shape, while liquid has not fixed shape.

B- 1. matter  
2. three  
3. liquid  
4. two  
5. water.

C- 1. (✓) 2. (X) 3. (X) 4. (X) 5. (✓)

D- 1. books, toys, bricks  
2. milk, water, petrol  
3. solid, liquid, gas  
4. oxygen, hydrogen, carbon dioxide  
5. salt, sugar, alum.

## 16. Energy and Force

A- 1. The ability to do work  
2. sun, water, fossil fuel, wind, wood, etc  
3. Fuels of our past and for our future  
4. Machine is a device makes life easier, scissors, stapler, and screw  
5. a pull or a push.

B- 1. sun  
2. energy  
3. solar  
4. stapler  
5. force.

C- 1. (X) 2. (X) 3. (✓) 4. (X) 5. (X)

D- Do yourself.

## SCIENCE -5

### Unit I : Human Body

#### 1. Human Skeleton and Muscles

A- 1. 206 bones  
2. Bony framework  
3. the place, where two bones meet, Gliding and pivot joints  
4. bundles of fibres  
5. involuntary muscles.

B- 1. skeleton  
2. 22 large, small  
3. 650  
4. involuntary.

C- 1. (X) 2. (✓) 3. (X) 4. (✓) 5. (X)

D- 1. hard tissue in our body  
2. made up of 33 small bones  
3. place, where two bones meet  
4. involuntary muscles  
5. the muscles of the heart.

#### 2. The Nervous System

A- 1. Control system of human body, three parts  
2. it controls every part of the body  
3. the control center of the body  
4. made up of nerve fibres  
5. five

B- 1. net of wire  
2. brain, spinal cord  
3. brain  
4. brain, cerebrum  
5. cerebrum

C- 1. (✓) 2. (X) 3. (X) 4. (✓) 5. (X)

D- 1. special group on nerves  
2. the largest part of the brain  
3. at the back of the brain, below the cerebrum  
4. medulla at the top of the spinal cord  
5. to know the world around us

#### 3. Food and Health

A- 1. Right food in right amount  
2. keeps the body fit and healthy  
3. proteins-help our body to grow big and strong, carbohydrates give us energy to work, vitamins -keep the body healthy and to fight diseases, fat-give us energy to work and play  
4. diseases do not spread from one person to another  
5. protecting by acquiring immunity against certain diseases.

B- 1. diet  
2. fit, healthy  
3. rest, exercise  
4. diseases, germs  
5. Vaccination, diseases.

C- 1. (✓) 2. (X) 3. (✓) 4. (X) 5. (X)

D- 1. lack of mineral  
2. right food in right amount  
3. viral fever, common cold  
4. plague dengue  
5. lack of vitamins.

### Unit II : About The Plants and Animals

#### 4. Plant Life

A- 1. For the existence of life on the Earth  
2. from

seed and germination 3. the growing of a baby plant from a seed 4. by wind, water, animals and splitting 5. healthy soil, fertilizer, climate and season.

**B-** 1. soil erosion 2. fruits 3. seed coat 4. germination 5. new plants.

**C-** 1. (✓) 2. (✗) 3. (✗) 4. (✓) 5. (✓)

**D-** 1. winter crops 2. summer crops 3. growing a baby plant 4. crop without diseases.

### 5. Animal Life

**A-** 1. The surrounding in which an animal lives 2. animals and human breathe through lungs, fishes breathe with gills 3. herbivorous animals buffalo, cow, deer, carnivorous animals-lion, tiger, cat, 4. to move in search for food, to run and protect itself 5. periodic movement of animals from one place to another and back to their homes.

**B-** 1. animals, earth 2. breathe, live 3. gills 4. gills 5. migration, movement, another.

**C-** 1. (✗) 2. (✗) 3. (✓) 4. (✓) 5. (✗)

**D-** 1. Eat grass and plants 2. eat both plants and flesh of other animals 3. eat seeds and fruits 4. live in water.

### Unit III : Housing

#### 6. Houses

**A-** 1. Provide us shelter 2. kucha house and pucca house 3. plenty of sunshine and air 4. surroundings and weather conditions 5. by cleaning periodically.

**B-** 1. House, human 2. shelter 3. pucca houses 4. building 5. beautiful, increased.

**C-** 1. (✓) 2. (✗) 3. (✗) 4. (✓) 5. (✗)

**D-** 1. made from solid and strong materials like 2. made from mud, bamboos, palm leaves etc. 3. the place, where it rains heavily have sloping roofs.

### Unit IV : Air, Water and Soil

#### 7. Air and Water

**A-** 1. The mixture of many gases 2. the blanket of air around the earth 3. nitrogen, oxygen, and carbon dioxide 4. by planting more and more trees 5. by evaporation and distillation.

**B-** 1. Earth, blanket 2. weight, occupies 3. about 78% 4. air, water vapour 5. 3/4

**C-** 1. (✓) 2. (✗) 3. (✗) 4. (✗) 5. (✓)

**D-** 1. mixture of many gases 2. settling of insoluble impurities at the bottom 3. the clear water above mud is poured in to another container 4. method of separating impurities 5. process of clean water by chlorine gas.

#### 8. Soil Erosion and Conservation

**A-** 1. Because it supports the whole plant life 2. by

weathering from rocks 3. soil carried away by heavy rains, water and wind 4. the protection of soil against erosion 5. to protect crops by insects and mammals.

**B-** 1. soil 2. hold, prevent 3. soil conservation 4. slow 5. insecticides.

**C-** 1. (✓) 2. (✗) 3. (✓) 4. (✓) 5. (✗)

**D-** 1. carried away by heavy rain and wind 2. moving air 3. cutting of trees 4. planting trees.

### 9. Rocks and Minerals

**A-** 1. Hard materials, igneous, sedimentary and metamorphic 2. rocks break due to rain, temperature, water etc. 3. formed from melted material 4. naturally occurring chemical element like-iron, copper, lead, etc. 5. Coal and petroleum are mineral fuels. These are fossil fuel derived from rocks. These are non-renewable resources.

**B-** 1. rocks 2. magma 3. lava 4. Granite 5. pumice.

**C-** 1. (✓) 2. (✓) 3. (✗) 4. (✗) 5. (✓)

**D-** 1. variety of volcanic rock 2. the coarse grained sedimentary rocks 3. hard and smooth metamorphic rock 4. Quartz is formed from sandstone.

### Unit V : The Universe

#### 10. The Moon

**A-** 1. Because there is no air and water. 2. a dark shape that a thing makes when they are blocking out the light 3. Neil Armstrong 4. satellite to collect weather information 5. man-made satellite, communication.

**B-** 1. moon neighbour 2. transduce 3. earth 4. gravity, gravity 5. opaque.

**C-** 1. (✗) 2. (✗) 3. (✓) 4. (✗) 5. (✓)

**D-** 1. dark shape by blocking out the light 2. they do not pass light 3. shadow of Earth and moon 4. Shadow of Earth on moon.

### Unit VI : Things Around Us

#### 11. Gases

**A-** 1. Any carbon compound is burned in an excess of oxygen 2. colourless and odourless gas, soluble in water 3. very important gas 4. Breathe and helps in burning 5. In fire extinguishers and blasting coal.

**B-** 1. soluble 2. water 3. oxygen 4. burning 5. oxygen.

**C-** 1. (✗) 2. (✓) 3. (✗) 4. (✓) 5. (✓)

**D-** 1. petrol, diesel, coal, kerosene 2. Used by Astronauts, Mountaineers 3. Used to extinguish fire 4. Man to go in space for experiments.

#### 12. Magnet

**A-** 1. It is a part of speaker, microphone, doorbells, etc. 2. force of magnet 3. space where magnetic

force works 4. freely hung magnet always points to wards north-south direction.

**B-** 1. maximum 2. different 3. force 4. neutral 5. cylinders, pencils.

**C-** 1. (✓) 2. (✗) 3. (✓) 4. (✓) 5. (✓)

**D-** 1. Material that can attract magnetic substances 2. field of magnetic force 3. force of magnet.

### **13. Heat**

**A-** 1. A form of energy 2. heat is the form of energy while temperature is the amount of heat 3. matter will expand 4. change in to liquid 5. Good conductors silver, copper : Bad conductor-wood, plastic. Insulators : Glass, rubber, plastic, etc.

**B-** 1. form 2. thermometer 3. temperature 4. expands 5. state 6. expand.

**C-** 1. (✓) 2. (✓) 3. (✗) 4. (✗) 5. (✓)

**D-** 1. materials which can allow heat to flow 2. things which do not allow heat to flow 3. liquid expands on heating 4. Gas expands more on heating.

### **14. Solid, Liquid, Gas**

**A-** 1. Anything that take up space, solid, liquid gas 2. smaller units of a substance 3. matter made up of two or more kind of atoms 4. solid, liquid, gas 5. a temporary change, a permanent change.

**B-** 1. matter 2. hard, shape, volume 3. volume, shape 4. shape 5. permanent.

**C-** 1. (✗) 2. (✗) 3. (✓) 4. (✗) 5. (✓) 6. (✗)

### **15. Simple Machine**

**A-** 1. A device that helps to perform our work more easily 2. a simple machine used to lift load easily 3. screw in inclines the winds around itself 4. popular simple machine 5. a simple machine having a fulcrum load and effort.

**B-** 1. many ways 2. a fulrum 3. inclined plane 4. moves 5. screws.

**C-** 1. (✓) 2. (✓) 3. (✓) 4. (✗) 5. (✓)

**D-** 1. lever is a simple machine 2. These are fixed at one place 3. It is a very popular simple machine 4. a simple machine used to push two object apart.

### **Unit VII : Safety Rules**

#### **16. Safety and First Aid**

**A-** 1. Follow the safety rules 2. put a lot of water, apply a lotion 3. any crack and break in the bone 4. use a hard pad of cotton 5. wash the area with water and antiseptic soap.

**B-** 1. footpath, left side 2. first aid 3. bone, fracture 4. tourniquet 5. zebra crossing.

**C-** 1. (✗) 2. (✗) 3. (✓) 4. (✓) 5. (✓)

**D-** 1. Use an antiseptic to a clean wound, apply the antiseptic cream with clean cotton.