



Science & Technology.

Teacher's Manual

Class I – V

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Vidyalaya Prakashan

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Class – I

Lesson 1 : Plants Around Us

Part 'A'

- | | | | | |
|----|-------------|----------|-----------|-----------|
| A. | 1. Creepers | 2. Trees | 3. Plants | 4. Shrubs |
| B. | 1. F | 2. T | 3. T | 4. T |
| C. | 1. (d) | 2. (b) | 3. (c) | 4. (a) |
| D. | 1. (d) | 2. (c) | 3. (a) | 4. (d) |

Part 'B'

1. Neem tree and mango tree
2. Brinjal, mint
3. Jasmine, rose

Lesson 2 : Plants And Their Parts

Part 'A'

- | | | | | |
|----|-----------|-----------|----------|----------|
| A. | 1. Green | 2. Flower | 3. Roots | 4. Seeds |
| B. | 1. F | 2. T | 3. T | 4. T |
| C. | 1. Flower | 2. Roots | 3. Leaf | 4. Thorn |
| D. | 1. (c) | 2. (d) | 3. (d) | 4. (c) |

Part 'B'

- | | | |
|----|---|-----------|
| 1. | Roots, stem, leaves, bud, flower and fruit. | 2. Roots |
| 3. | Stem, leaves, buds, flower and fruit. | 4. Flower |

Lesson 3: Seeds Produce Plants

Part 'A'

- | | | | | |
|----|------------|-----------|---------------|---------|
| A. | 1. Flowers | 2. Flower | 3. baby plant | 4. seed |
| B. | 1. F | 2. T | 3. F | 4. F |
| C. | 1. (c) | 2. (d) | 3. (a) | 4. (b) |

Part 'B'

- | | | |
|----|-----------------------|----------------------|
| A. | 1. Guava, pomegranate | 2. Mango, strawberry |
| | 3. Germination | 4. Water, oxygen |
| B. | 1. Banana | 2. Pomegranate |
| | 3. Seedling | 4. Flower |

Test Paper 1

- A. Fill in the blanks :
- | | | | |
|-----------|-----------|-----------|-----------|
| 1. shrubs | 2. shrubs | 3. fruits | 4. flower |
|-----------|-----------|-----------|-----------|
- B. True or false :
- | | | | | |
|------|------|------|------|------|
| 1. T | 2. F | 3. F | 4. F | 5. T |
|------|------|------|------|------|
- C. Answer in one or two words :
- | | | | |
|-------------|-----------|---------------|-----------|
| 1. Climbers | 2. Flower | 3. Rose plant | 4. Flower |
|-------------|-----------|---------------|-----------|

D. Tick (✓) the correct option :

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

Lesson 4 : Plants Give Us Food

Part 'A'

- A. 1. Raw 2. Minerals 3. Pulses 4. Cereals
B. 1. T 2. F 3. T 4. T
C. 1. (d) 2. (c) 3. (d) 4. (c)
D. 1. Cabbage 2. Apple 3. Mustard 4. Rice
5. Moong

Part 'B'

1. Moong, gram 2. Tea, coffee
3. Ginger, potato 4. Orange, grapes

Lesson 5: Animals Around Us

Part 'A'

- A. 1. Creatures 2. Wings 3. Six 4. Pet
B. 1. T 2. F 3. T 4. F
C. 1. pet animal 2. water animal
3. wild animal 4. can fly
D. 1. (a) 2. (d) 3. (d) 4. (b)

Part 'B'

1. Lion, tiger 2. Dog, parrot
3. Monkey, squirrel 4. Elephant, giraffe

Lesson 6 : Some Special Characteristics of Animals

Part 'A'

- A. 1. structures 2. Bugs 3. Dogs 4. beaks
B. 1. T 2. T 3. F 4. T
C. 1. (d) 2. (a) 3. (d) 4.(a)
D. 1. Butterfly 2. Mosquito 3. Snake 4.Owl

Part 'B'

1. Snake 2. Lizard/frog
3. Cat, dog 4. Peacock, butterfly

Lesson 7 : Food And Shelter of Animals

Part 'A'

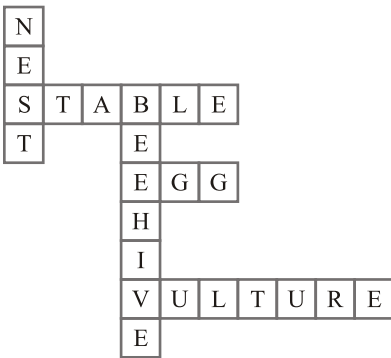
- A. 1. Food 2. Web 3. Burrow 4. Tree
B. 1. T 2. T 3. F 4. T
C. 1. (b) 2. (c) 3. (b) 4. (d)

- D. 1. Hive 2. Nest 3. Den 4. Sties

Part 'B'

- A. 1. Snakes, earthworms 2. Pigeon, sparrow
 3. Cow, goat 4. For the safety of eggs.

B.



Lesson 8 : Air Around Us

Part 'A'

- A. 1. Air 2. Clean 3. Air 4. space, mass
 B. 1. T 2. F 3. T 4. F
 C. 1. (d) 2. (b) 3. (c) 4. (d)
 D. 1. flies 2. heavy 3. burns
 4. absence of air 5. sails

Part 'B'

1. Yes.
2. We can only feel the presence of air.
3. Fast moving air is called wind.
4. Kite fly in the sky by wind.

Test Paper – II

- A. Fill in the blanks :
 1. forests 2. love 3. fins, tail 4. eggs
 5. raw
- B. True and false :
 1. T 2. F 3. T 4. T 5. F
- C. 1. ant 2. dog 3. honey-bee
 4. potato, ginger 5. fish
- D. Tick (✓) the correct option :
 1. (d) 2. (b) 3. (d)
 4. (d) 5. (a)

Model Test Paper – I

- A. Fill in the blanks :
- | | | | |
|------------|----------|---------|------------|
| 1. food | 2. roots | 3. weak | 4. mammals |
| 5. insects | | | |
- B. True or false :
- | | | | | |
|------|------|------|------|------|
| 1. T | 2. T | 3. T | 4. T | 5. F |
|------|------|------|------|------|
- C. Answer in one words :
- | | |
|-------------------|-----------|
| 1. potato, ginger | 2. papaya |
| 3. air and water | 4. leaves |
| 5. spinach mint | |
- D. Tick (✓) the correct options :
- | | | | | |
|--------|--------|--------|--------|--------|
| 1. (a) | 2. (b) | 3. (c) | 4. (c) | 5. (b) |
|--------|--------|--------|--------|--------|
- E. Answer in details :
- Ans 1. a. Animals are living beings that need food, air and water to live.
b. Most of the animals have four legs.
c. Animals are our best friends.
- Ans 2. Because they are helpful to us in many ways.
- Ans 3. Two plants that gives us oil are mustard plant and sunflower plant. Two uses of oil :
1. It is used for coking.
 2. Some oil like eucalyptus oil is also used in medicines.
- Ans 4. The blowing wind causes the leaves of trees to flutter on.
- Ans 5. Water, air, warmth and soil.

Lesson 9 : Water – A Necessity of Life

Part 'A'

- | | | | | |
|----|---------------|----------|------------------|---------|
| A. | 1. Clean/pure | 2. fires | 3. Waste | 4. Life |
| B. | 1. F | 2. T | 3. F | 4. T |
| C. | 1. (d) | 2. (d) | 3. (c) | 4. (c) |
| D. | 1. Washing | | 2. taking a bath | |
| | 3. Cooking | | 4. Watering | |

Part 'B'

- | | |
|------------------|---------------------|
| 1. Rivers, lakes | 2. Cooking, bathing |
| 3. Yes | 4. Plants, animals |

Lesson 10 : Weather

Part 'A'

- | | | | | |
|----|------------|---------------|---------|--------|
| A. | 1. weather | 2. the summer | 3. warm | 4. fan |
| B. | 1. F | 2. F | 3. T | 4. T |
| C. | 1. (d) | 2. (c) | 3. (c) | 4. (b) |
| D. | 1. Rainy | 2. Sunny | 3. Cold | |

Part 'B'

- | | |
|-------------------------------|----------------|
| 1. Raincoats, umbrella | 3. Tea, Coffee |
| 2. Summer, winter and monsoon | 4. Sun, Rain |

Lesson 11 : The Sun, The Moon And The Stars

Part 'A'

- | | | | |
|------------------|--------------|----------------|---------|
| A. 1. Sun | 2. Moon | 3. Stars | 4. Moon |
| B. 1. F | 2. T | 3. F | 4. F |
| C. 1. (d) | 2. (b) | 3. (a) | 4. (b) |
| D. 1. night, sun | 2. hot, heat | 3. moon, shine | |

Part 'B'

- | | |
|--------------------|---|
| 1. Sun, Moon | 2. Because there is no air and water on it. |
| 3. Heat and light. | 4. Sun, stars |

Let Us have Fun



Test Paper – III

- | | | | | |
|---------------------------|-------------------|------------|-------------|------|
| A. 1. water/air | 2. Woollen | 3. weather | 4. crescent | |
| 5. clean/wash | | | | |
| B. 1. F | 2. F | 3. T | 4. T | 5. F |
| C. 1. Plants and animals | 2. Light and heat | | | |
| 3. Umbrella and rain coat | 4. Rivers, lakes | | | |
| 5. Tea, coffee | | | | |
| D. 1. (d) | 2. (d) | 3. (b) | | |
| 4. (d) | 5. (b) | | | |

Lesson 12 : Good Health And Hygiene

Part 'A'

- | | | | |
|------------|------------|------------------------|----------|
| A. 1. Food | 2. Germs | 3. Bath | 4. Nails |
| B. 1. T | 2. F | 3. T | 4. F |
| C. 1. (c) | 2. (d) | 3. (c) | 4. (c) |
| D. circle | | | |
| comb, | soap (Lux) | , Toothpaste (colgate) | |

Part 'B'

- A. 1. We get vitamins, minerals, energy giving nutrients like carbohydrates, fats and proteins.
2. Playing and working
3. A nail-cutter.
4. Nose

Lesson 13 : Keeping Body Fit

Part 'A'

- A. 1. habits 2. health 3. tired 4. rest
B. 1. T 2. F 3. F 4. T
C. 1. (a) 2. (b) 3.(c) 4. (a)

Part 'B'

1. Parks and playgrounds. 2. Swimming and cycling
3. Exercise 4. Rest and sleep

Lesson 14 : Safety Habits And First – Aid

Part 'A'

- A. 1. save 2. roads 3. first-aid 4. careful
B. 1. T 2. F 3. T 4. F
C. 1. (b) 2. (d) 3. (c) 4. (c)
D. 1. (e) 2. (a) 3. (b)
4. (c) 5. (d)

Part 'B'

1. Zebra crossing 2. Safety rubber tube
3. Electric wires and electric sockets 4. First aid box

Lesson 15 : House – Where We Live

Part 'A'

- A. 1. house 2. protection 3. guests 4. rooms
B. 1. F 2. T 3. F 4. F
C. 1. (b) 2. (d) 3. (d) 4. (a)

Part 'B'

1. Bedroom 2. Kitchen
3. Proper ventilation and sufficient light 4. Dining room.

Test Paper – IV

- A. 1. right times 2. germs 3. habits 4. run
5. tired
B. 1. F 2. T 3. T 4. F 5. T

- C. 1. Milk 2. Antiseptic solution (Dettol)
 3. Swimming 4. Park
- D. 1. (a) 2. (d) 3. (c) 4. (c) 5. (d)

Model Test Paper – II

- A. 1. Clean 2. bedroom 3. guests 4. crowd
 5. earbuds
- B. 1. T 2. T 3. T 4. T 5. T
- C. 1. Dining room 2. Sun 3. Milk
 4. Moon 5. Nail-cutter
- D. 1. Weather : It is the condition of atmosphere in one area at a particular time.
 2. Moon shines when the light of sun faces on it.
 3. (i) Do not run or play on roads.
 (ii) Never play with matchsticks, knives, etc.
 4. Proper ventilation, sufficient light and hygiene.
 5. Zebra-crossing.
- E. 1. (b) 2. (d) 3. (a) 4. (c)
 5. (d)

Class – II

Lesson 1 : Living And Non-living Things

Part ‘A’

- A. 1. life 2. natural 3. oxygen 4. kitten
- B. 1. T 2. F 3. T 4. T
- C. 1. (d) 2. (d) 3. (c) 4. (c)

Part ‘B’

1. Chair, table
2. Trees, animals
3. Things that need food, air and water to grow.
4. Three characteristics of living things are :
 - (i) Living things grow;
 - (ii) Living things reproduce;
 - (iii) Living things need food, air and water.

Lesson 2 : Kinds of Plants

Part ‘A’

- A. 1. green 2. support 3. climbers 4. time
- B. 1. T 2. F 3. F 4. T
- C. 1. (b) 2. (c) 3. (b) 4. (a)

- D. 1. (c) 2. (d) 3. (a) 4. (b)

Part 'B'

1. Very big and tall plants are called trees. eg. Mango tree, Neem tree.
2. Shrubs are smaller than trees with thin, hard woody stem. eg. Rose, Jasmine.
3. Small plants with weak and soft stem are called herbs eg. Mint, spinach.
4. Yes, because they have very soft and weak stems.
A. Herb, Tree, Herb
B. Riddles : (i) tree (ii) climber

Lesson 3 Useful Plants

Part 'A'

- A. 1. beautiful 2. Eucalyptus 3. cotton 4. acacia
B. 1. T 2. F 3. F 4. T
C. 1. (c) 2. (c) 3. (b) 4. (d)

Part 'B'

1. Medicines, paper, rubber, cereals.
2. Tulsi, Mint.
3. Sunflower, Mustard.
4. Wheat, rice

Fun Time

- | | Oil | Food Grains | Medicines |
|----|-----------|-------------|-----------|
| 1. | Groundnut | Gram | Cinchona |
| 2. | Coconut | Maize | Tulsi |
| | | Rice | Neem |

Test Paper – I

- A. 1. Man-made 2. Child 3. Soil 4. Herbs
5. Juice
- B. 1. F 2. T 3. F 4. T
5. F
- C. 1. Sunflower, brinjal 2. Mint
3. Neem 4. Cotton
5. Natural —plants
Man-made things — building
- D. 1. (d) 2. (b) 3. (d) 4. (c)
5. (d)
- E. Give two examples:
(a) Climbers — pea, moneyplant

- (b) Shrub — Rose, Jasmine
- (c) Herbs — Mint, spinach
- (d) Beverages — Tea, Coffee
- (e) Fibres — Cotton, jute

Lesson 4 : Domestic Animals

Part 'A'

- | | | | | |
|----|-------------|----------|------------|-----------|
| A. | 1. Domestic | 2. Honey | 3. Leather | 4. Winter |
| B. | 1. T | 2. T | 3. T | 4. F |
| C. | 1. (d) | 2. (c) | 3. (c) | 4. (d) |

Part 'B'

1. Animals that we keep at our farms.
2. Dog, cat
3. Hen, duck
4. Shoes and belt

Lesson 5 : Wild Animals

Part 'A'

- | | | | | |
|----|-----------|---------|------------|----------|
| A. | 1. Forest | 2. Nest | 3. Burrows | 4. Honey |
| B. | 1. T | 2. T | 3. F | 4. T |
| C. | 1. (c) | 2. (b) | 3. (a) | 4. (a) |

Part 'B'

1. Animals that live in forest. eg. lion, tiger.
2. Animals that eat only plants eg. deer, cow.
3. To lay their eggs.
4. Animals who eat flesh of other animals eg. lion, tiger.

Fun Time

- | | | | | |
|------|------|------|------|------|
| 1. D | 2. W | 3. D | 4. W | 5. W |
|------|------|------|------|------|

Riddles

- | | |
|---------|----------|
| 1. Lion | 2. Camel |
|---------|----------|

Lesson 6 : Air Around Us

Part 'A'

- | | | | | |
|----|------------------|-----------------|--------|--------|
| A. | 1. Air | 2. Fresh, clean | | |
| | 3. water vapours | 4. Polluted | | |
| B. | 1. F | 2. T | 3. T | 4. T |
| C. | 1. (d) | 2. (d) | 3. (d) | 4. (d) |

Part 'B'

1. Air contains many gases, water vapours, dust particles, smoke, germs, etc.

2. Smoke, dust particles. 3. Green plants
4. Parks and open places

Fun Time

- A. 1. Smoke 2. Dust particles 3. Germs
B. X ✓ ✓

Lesson 7 : The Moving Air

Part 'A'

- A. 1. Wind 2. Air 3. Wind 4. Storm
B. 1. T 2. F 3. T 4. T
C. 1. (c) 2. (b) 3. (d) 4. (c)

Part 'B'

1. The gentle moving wind is called breeze.
2. Very fast and strong wind is called storm.
3. Wind mill.
4. Birds fly because of moving air.

Test Paper – II

- A. 1. Domestic 2. Loads 3. Nests 4. Dust
5. Green plants
B. 1. F 2. T 3. T 4. T 5. T
C. 1. Bear 2. Deer 3. Parks
4. Chimneys from factories 5. Shoes
D. 1. (d) 2. (d) 3. (a) 4. (d)
5. (d)
F. Flesh eating animals — Lion, tiger
Domestic — Cow, camel
Vegetable we eat — carrot, radish
Animals that live in holes — snake, rabbit
Very big animals — Camel, giraffe

Model Test Paper – I

- A. 1. Man-made 2. Woody, trunk
3. Bamboo, papyrus 4. Cocoons
5. Plants
B. 1. T 2. F 3. F 4. T
5. T
C. 1. (c) 2. (a) 3. (c) 4. (d)
5. (a)
D. 1. Cow, goat 2. Wind

3. Wind mill
4. Lion
5. Sunflower
- E. 1. Living Non-Living
 a. Living things grow b. They don't grow
 b. They need food, air and water b. They don't need food, air and water.
2. Because their stem is too weak to stand upright.
 3. With the force of wind.
 4. Medium size plant with hard stem eg. Rose, Mehandi.
 5. Animals that we keep at farms et. cow, camel.

Lesson 8 : Sources of Water

Part 'A'

- A. 1. Life 2. Snow 3. Waste 4. Boiled
 B. 1. F 2. T 3. T 4. T
 C. 1. (d) 2. (a) 3. (d) 4. (c)

Part 'B'

1. Rivers, lakes, ponds, sea.
 2. Rain.
 3. To kill germs.
 4. For washing clothes and for watering plants.

Lesson 9 : Forms of Water

Part 'A'

- A. 1. Three 2. Ice 3. Drops of water
 4. Evaporation
 B. 1. T 2. T 3. T 4. T
 C. 1. (b) 2. (b) 3. (d) 4. (a)

Part 'B'

1. Solid (eg ice), liquid (water) gas (steam).
 2. The changing of water into water vapours on heating.
 3. The changing of water vapours into tiny droplets of water on cooling.
 4. Water cycle.

Fun Time

1. Ice 2. Water 3. Droplets of water

Lesson 10 : The Sun And Shadows

Part 'A'

- A. 1. Stars 2. Sun 3. East, West 4. Directions

- B. 1. F 2. T 3. F 4. T
 C. 1. (d) 2. (c) 3. (c) 4. (a)

Part 'B'

1. Star, Sun
2. East, West, North, South.
3. When a path of light is obstructed by an opaque object.
4. Light

Test paper – III

- A. 1. Rain 2. Plants, trees
 3. Gaseous 4. Heavenly bodies
 5. 81/4
- B. 1. F 2. T 3. F 4. F
 5. T
- C. 1. (d) 2. (d) 3. (b) 4. (a)
 5. (a)
- D. 1. Sun 2. Melting 3. Sea 4. Tubewell
 5. Rain

Lesson 11 : Exercise And Posture

Part 'A'

- A. 1. Bones 2. Bones 3. Exercise 4. Straight
 B. 1. T 2. F 3. T 4. T
 C. 1. (c) 2. (c) 3. (d) 4. (c)

Part 'B'

1. Bones and Muscles.
2. Bones and muscles are helpful to us in these two ways :
 (i) They cause movement of different parts of body.
 (ii) They help us to sit, stand etc.
3. When our posture is correct.
4. By doing simple exercises daily.

Fun Time

- A. Carrom, snakes and ladders, cards, etc.
 B. Cricket, football, basketball, etc.

Lesson 12 : Food For Health

Part 'A'

- A. 1. Food 2. Food 3. Clean 4. Disease
 B. 1. T 2. F 3. T 4. F
 C. 1. (c) 2. (b) 3. (d) 4. (c)

Part 'B'

1. Energy.
2. To grow, to do different activities of body and to remain fit and healthy.
3. To protect ourselves from various diseases.
4. Two good food habits are :
 - (a) We should wash our hands before and after every meal.
 - (b) We should eat slowly and chew our food well.

Fun Time

- B. Milk, fish, pulses, eggs
Rice, bread, almonds, butter
Apple, potato, cucumber, cauliflower

Lesson 13 : Rocks And Mineral

Part 'A'

- | | | | | |
|----|----------|------------|-----------|---------|
| A. | 1. Rocks | 2. Colours | 3. Marble | 4. Coal |
| B. | 1. F | 2. F | 3. F | 4. T |
| C. | 1. (d) | 2. (b) | 3. (a) | 4. (a) |

Part 'B'

1. Our earth is made up of hard matter called rocks. eg. marble, granite.
2. Marble.
3. Petrol, diesel and vaseline.
4. (a) It is used to cut glass.
(b) It is also used to make jewellery.

Fun Time

- | | | | |
|----|---------------|--------------|----------|
| A. | 1. Marble | 2. Sandstone | 3. Slate |
| | 4. China clay | 5. Graphite | |

Lesson 14 : Safety And First Aid

Part 'A'

- | | | | | |
|----|-----------------|----------|----------|-------------|
| A. | 1. Safety rules | 2. tease | 3. queue | 4. Swimming |
| B. | 1. T | 2. F | 3. T | 4. F |
| C. | 1. (c) | 2. (d) | 3. (b) | 4. (b) |

Part 'B'

1. It is the help given to an injured person before the doctor arrives.
2. On footpath.
3. We should be kind and caring to our pets.
4. Two safety rules while travelling in a bus are :
 - (a) Don't get down from a moving bus.
 - (b) Don't lean out of moving bus.

Fun Time

1. ✓ 2. ✗ 3. ✗ 4. ✓ 5. ✓

Lesson 15 : Different Types of Houses

Part 'A'

- A. 1. House 2. Temporary 3. Houseboat 4. Flat
B. 1. F 2. T 3. T 4. F
C. 1. (d) 2. (a) 3. (d) 4. (b)

Part 'B'

1. We need a house to protect ourselves from heat, cold and rain.
2. Igloos, caravans.
3. The houses made up in ice blocks.
4. It helps rain water or snow to fall off easily.

Fun Time

- A. 1. Pucca house 2. Tent 3. Hut
B. 1. **Hut** Mud, bamboo, straw and wood.,
Pucca house Iron, cement, bricks

Test Paper – IV

- A. 1. Bones 2. Food 3. House 4. Talc
5. Marble
B. 1. T 2. F 3. T 4. F
5. T
C. 1. Bones and muscles 2. On footpath
3. 8-10 glasses 4. Coal
5. Temporary and permanent houses
D. 1. (b) 2. (b) 3. (d) 4. (d)
5. (d)

Model Test Paper – II

- A. 1. Plants, animals, human beings
2. Evaporation
3. Heavenly bodies
4. Bones, muscles
5. Water
B. 1. F 2. F 3. T 4. T
5. F
C. 1. The houses that last long called permanent house made up of iron bars, bricks, stones, tiles and cement.
2. Coal is a soft black rock. Its two uses are :
(a) It is used for cooking.
(b) It is used for running steam engines.

3. When light cannot pass through an object, a portion of darkness is formed called a shadow.
 4. Three good eating habits are :
 - (a) We should wash our hands before and after each meal.
 - (b) We should always eat clean fresh and covered food.
 - (c) We should eat slowly and chew our food well.
 5. The sun gives us heat and light.
- D. 1. (b) 2. (a) 3. (c) 4. (b)
5. (c)
- E. 1. West 2. Footpath 3. Ironbars, cement
4. Swimming tube 5. At noon

Class 3 :

Lesson 1 : Living And Non-living Things

Part 'A'

- A. 1. air 2. reproduction 3. sunflower
4. feel 5. seeds
- B. 1. T 2. F 3. T 4. F 5. T
- C. 1. (d) 2. (d) 3. (b) 4. (c)
5. (d)

Part 'B'

- A. 1. Photosynthesis 2. Reproduction
3. Non-living 4. Air, food
5. Lungs
- B. 1. Living eg. plants, animals, etc. and non-living eg. table, chair, etc.
2. They get their food from dead decaying matter.
3. (a) Living things grow
(b) Living things reproduce
(c) Living things breathe
4. To get energy for various activities and to stay alive.
5. The process by which all living beings produce their own kind.
6. Hen - chick Cat - kitten cow - calf

Lesson 2 : Plants Differ From Animals

Part 'A'

- A. 1. Living 2. Sense 3. Plants 4. Lungs
5. Seeds
- B. 1. T 2. F 3. T 4. T
5. F
- C. 1. (c) 2. (c) 3. (c) 4. (d)

Part 'B'

- A. 1. Stomata 2. Mushroom
3. Touch-me-not 4. Stigmata
5. Snakes, Hen
- B. 1. In search of food, shelter and to protect themselves from their enemies.
3. By the process of photosynthesis.
4. Plants Animals
a. They can make food by their own a. They depend on plants for their food
b. They are fixed at one place b. They can move from one place to another.
5. Plants breathe by stomata while animals like cat, dog breathe by lungs.
6. By the help of their sense organs.

Lesson 3 : Parts of a Plant

Part 'A'

- A. 1. Roots 2. Tap 3. Shoot 4. Lamina
5. Flowers 6. Leaves
- B. 1. F 2. T 3. F 4. T 5. F
- C. 1. (d) 2. (c) 3. (c) 4. (d)

Part 'B'

- A. 1. Potato, sugarcane 2. Midrib
3. Wheat, Rice 4. Radish, Carrot
5. Chlorophyll
- B. 1. Root system and shoot system.
2. Tap root and fibrous root. Functions :
(a) It anchors the plant firmly in soil.
(b) It absorbs water and mineral from the soil.
(c) Sometimes, it stores food also.
3. Functions :
(a) It holds plants straight to get sunlight and air.
(b) Water and minerals salts are carried by it from roots to all parts of plant.
(c) It also store food in some plants like potato.
4. Structure of leaf - Page 21.
5. Because they store food in stem. eg. mint.

Test Paper – I

- A. 1. Living 2. Food 3. Roots 4. Lamina
5. Flower

- B. 1. T 2. T 3. T 4. F
 5. F
- C. 1. (a) calf (b) kitten 2. Touch-me-not plant
 3. Chlorophyll 4. Neem tree
 5. Banana
- D. 1. (c) 2. (c) 3. (d) 4. (c)
 5. (b)

Lesson 4 : Food And Feeding Habits of Animals

Part 'A'

- A. 1. Food 2. Carnivores
 3. green plants/producer 4. Veterinarian
 5. grind
- B. 1. F 2. T 3. F 4. T
 5. T 6. F
- C. 1. (d) 2. (c) 3. (c) 4. (c)
 5. (d)

Part 'B'

- A. 1. Cow, goat 2. Snake 3. Mosquito
 4. Rat, rabbit 5. Cow, sheep
- B. 1. Herbivores, carnivores and omnivores.
 2. The animals that eat both plants and flesh of other animals are called omnivores. eg. Bear, crow.
 3. Deer eats plants and lion eat deer. This system is called a food chain.
 eg. green plants → deer → lion
 4. The grass eating animals like cow, buffalo, swallow their food and again bring back into mouth to chew are called ruminants. They are called so first the swallowed food is stored in a part of their body called rumen.
 5. Three ways for taking care of domestic animals are :
 (a) They must be fed properly
 (b) Their shelters must be cleaned daily
 (c) Sick animals should be taken to an animal doctor

Lesson 5 : Birds And Their Eating Habits

Part 'A'

- A. 1. Wings 2. Light, fluffy 3. Teeth
 4. webbed 5. down
- B. 1. F 2. T 3. T 4. T
 5. F 6. T

- C. 1. (c) 2. (d) 3. (d) 4. (b)
5. (c)

Part 'B'

- A. 1. Sunbird 2. Vulture, eagle
3. Ostrich, Emu 4. Down feathers
5. Flight feathers
- B. 1. Flight feathers helps the bird in flying where as the down feathers cover the body of a bird to keep it warm.
2. Tail of a bird helps to change the direction while flying.
3. Special features of water birds are :
they have long, thin legs with wide spreading toes.
4. Beak of duck is broad and flat but beak of parrot is hooked.
5. The strong and sharp claws that help them to catch their prey are called talons eg. eagles.

Lesson 6 : Nests And Nesting

Part 'A'

- A. 1. eggs 2. untidy 3. wood chips 4. hollow
5. Penguins
- B. 1. T 2. F 3. T 4. T 5. T
- C. 1. (d) 2. (d) 3. (c) 4. (b)
5. (d)

Part 'B'

- A. 1. Cuckoo 2. Vulture 3. Tailor bird 4. Parrot
5. Woodchips and cotton
- B. 1. Birds need to make their nests :
(a) to lay and hatch their eggs
(b) to protect and feed their young ones
2. Wool, cotton, grass, twigs, rags, feathers, leaves, wood, etc.
3. Weaver bird weaves the grass in and out rapidly to make a beautiful nest.
4. Parent birds fed their babies and help them to learn flying till they learn it perfectly.
5. Because she donot make her own nest.

Test Paper – II

- A. 1. Carnivores 2. green plants 3. light, fluffy 4. eggs
5. vulture
- B. 1. F 2. T 3. T 4. F
5. T
- C. 1. Cuckoo 2. Woodpecker 3. Vultures and eagles

4. Emu 5. Lion, tiger
- D. 1. (c) 2. (a) 3. (d) 4. (d)
5. (d)

Lesson 7 : Water And Weather

Part 'A'

- A. 1. two-third 2. dissolve 3. weather 4. wind
5. storms
- B. 1. T 2. F 3. F 4. T
5. F
- C. 1. (d) 2. (a) 3. (b) 4. (d)
5. (a)

Part 'B'

- A. 1. Rain 2. Condensation 3. Rain
4. Loo 5. Freezing
- B. 1. Rain, lakes, ponds, rivers, seas, oceans, etc.
2. Because it is salty having so many salts dissolved in it.
3. Because the sun rays are falling straight as the sun is overhead.
4. Factors :
- (a) the sun (b) the wind
- (c) the clouds (d) the rain
5. Condensation : The process of changing of water vapours into tiny droplets of water on cooling is called condensation.
- Evaporation : The process of changing water into water vapours on heating is called as evaporation.

Model Test Paper – I

- A. 1. Natural 2. fungi and moulds 3. fibrous
4. eggs 5. leeches and mosquitoes
- B. 1. T 2. F 3. T 4. F
5. F
- C. 1. (d) 2. (d) 3. (b) 4. (c)
5. (d)
- D. 1. Evaporation 2. Emu, Penguin
3. Woodpecker 4. Lion
5. Spinach
- E. 1. Living things : The things which have life in them. eg. plants, animals etc.
- Non-living things : The things which do not have life in them. eg. chain, table, etc.
2. Three functions of roots are :

- (a) It helps the plant to fix in the soil.
 - (b) It absorb water and minerals from the soil.
 - (c) In some plants like radish, it store food also.
3. A bird fly with its wings and tail. When the bird flap its wings, the air under the wings pushes the bird up and it changes the direction with the help of tail.
 4. The process by which living organism produces their own kind is reproduction.
 5. A cloudy night is warmer because clouds do not allow the heat of earth to escape into the atmosphere.

Lesson 8 : Soil

Part 'A'

- | | | | | |
|----|----------|----------|-------------|-------------|
| A. | 1. Soil | 2. Loamy | 3. Bed rock | 4. Minerals |
| | 5. Humus | | | |
| B. | 1. T | 2. F | 3. F | 4. F |
| | 5. T | | | |
| C. | 1. (b) | 2. (b) | 3. (c) | 4. (c) |
| | 5. (d) | | | |

Part 'B'

- | | | | |
|----|---------------|--------------------------------|--|
| A. | 1. Subsoil | 2. Top soil, subsoil, bed soil | |
| | 3. Humus | 4. Sandy soil | |
| | 5. Loamy soil | | |
- B. 1. Soil is made up of gravel, sand, clay and humus.
 2. Soil is formed when rocks break into small pieces by the action of sun, wind, rain.
 3. Because it contains humus.
 4. To increase fertility of the soil for getting better yeild.

Lesson 9 : The Earth And Its Neighbour

Part 'A'

- | | | | | |
|----|----------------|--------|--------|--------------|
| A. | 1. atmosphere | 2. 24 | 3. Sun | 4. full moon |
| | 5. Astronomers | | | |
| B. | 1. F | 2. T | 3. T | 4. F |
| | 5. T | | | |
| C. | 1. (b) | 2. (b) | 3. (a) | 4. (b) |
| | 5. (c) | | | |

Part 'B'

- | | | | | |
|----|------------------|-------------|--------------|-------------|
| A. | 1. Constellation | 2. Bhaskara | 3. Pole star | 4. Crescent |
| | 5. Ursa major | | | |
- B. 1. A thick layer of air, that surrounds the earth is asmosphere.

2. Crust, mantle, core.
3. Rotation and revolution.
4. Days and nights are formed by the rotation of earth on its own axis.
5. A group of stars forming a pattern is known as constellation eg. orion, ursa major, scorpius etc.
6. Short notes :
 - (i) The sun : It is a star and big ball of hot gases. It is the nearest star to earth and gives us heat and light.
 - (ii) The moon : It is the only natural satellite of earth. It does not have its own light. It shines when light of sun falls on it. It is smaller than earth in size.
 - (iii) The stars : These are big heavenly bodies that remain fixed at one place. They give out their own light. They are much bigger in size than sun.

Lesson 10 : Our Body : A Wonderful Machine

Part 'A'

- A. 1. Five 2. Organ 3. nerves 4. kidneys
 5. large intestine
- B. 1. F 2. T 3. T 4. F
 5. T
- C. 1. (c) 2. (a) 3. (c) 4. (b)
 5. (b)

Part 'B'

- A. 1. Skeletal system 2. Heart
 3. Arteries 4. Teeth
- B. 1. The organs that help us to understand about the outer work are called sense organs. The five sense organs are eyes, ears, nose, tongue and skin.
2. Two functions of the skeleton system are :
 (a) It helps to give shape to the body.
 (b) It protects the internal organs of the body.
3. (a) by kidneys in the form of urine
 (b) by lungs, Co₂ is removed
 (c) by sweating, excess water and salts are removed.
4. (a) lungs
 (b) kidneys
 (c) heart and blood vessels
 (d) mouth, stomach and small intestine
 (e) bones and muscles

Test Paper - III

- A. 1. Gravel 2. satellite 3. atmosphere 4. 206
5. Digestive
- B. 1. F 2. F 3. T 4. T
5. T
- C. 1. Loamy soil 2. 3,84,000 km
3.500 4. 28 days
5. Orion
- D. 1. (b) 2. (d) 3. (c) 4. (c)
5. (b)

Lesson 11 : Care of Teeth

Part 'A'

- A. 1. Teeth 2. 32
3. Canines 4. rinse
5. Care
- B. 1. F 2. T 3. F 4. T
5. T
- C. 1. (c) 2. (c) 3. (a) 4. (c)

Part 'B'

- A. 1. Incisors, canines, premolars and molars.
2. Premolars and molars.
3. Premolars — 4; molars — 6
4. Calcium
- B. 1. Temporary and permanent.
Temporary at the age of 2 years.
Permanent at the age of 6 years.
2. Three functions of teeth :
(a) They give form and shape to the face
(b) They help us to look pretty
(c) Chew all kinds of food
3. Four kinds of teeth :
(1) Incisors (2) canines (3) premolars (4) molars
Functions :
(1) Incisors : Used for biting or cutting food into small pieces.
(2) Canines : Used for tearing the food.
(3) Premolars : for grinding food.
(4) Molars : for grinding food.
4. We can take care of our teeth by :
(a) brushing teeth twice in a day
(b) eating fruits like apples and guavas

4. We need a house to live in and to protect us from heat, cold and rain.
5. Soil is formed by breaking of big rocks into fine particles.
6. A group of stars, forming a definite pattern is called constellation. eg. Ursa major, scorpius.
7. We should never spit in the open to avoid the spread of diseases by flies.

Class IV

Lesson 1 : Plants Around Us

- | | | | | | |
|----|-------------------------------------|--------|-------------------|---------|------|
| A. | 1. T | 2. F | 3. F | 4. T | 5. T |
| B. | 1. Chlorophyll | | 2. Desert plants | | |
| | 3. Moulds | | 4. Stomata | | |
| | 5. CO ₂ (Carbon dioxide) | | 6. photosynthesis | | |
| | 7. Energy | | 8. Sugar | | |
| C. | 1. leaf - food factories | | | | |
| | 2. photosynthesis - green plants | | | | |
| | 3. glucose - stored food | | | | |
| | 4. stomata - exchange of gases | | | | |
| | 5. leaf stalk - petiole | | | | |
| D. | 1. (iii) | 2. (i) | 3. (iii) | 4. (ii) | |
| | 5. (iii) | | | | |
| E. | 1. Chlorophyll | | 2. Leaves | | |
| | 3. Stomata | | 4. Photosynthesis | | |
| | 5. Mushrooms & moulds | | | | |

Part 'B'

- | | | | | | |
|----|---|--|--|--|--|
| A. | 1. Water, carbondioxide in the presence of chlorophyll and sunlight | | | | |
| | 2. Photosynthesis is the process by which green plants make their food from the raw materials like CO ₂ and water in the presence of chlorophyll and sunlight. | | | | |
| | 3. They store extra food in different parts of the plant like roots, stem, leaves, fruits or seeds. | | | | |
| | 4. Various parts of leaf are — leaf base, leaf stalk, leaf blade.
Diagram page 6. | | | | |
| | 5. Animals get oxygen and food prepared by plants and in turn plants get carbondioxide gas given out by animals. | | | | |
| | 6. Because green leaves due to the presence of green pigment are able to prepare food by the process of photosynthesis. | | | | |
| B. | 1. Starch is formed in green leaves. Activity -1 on pg 8 | | | | |

2. Chlorophyll is necessary for photosynthesis. Activity - 3 on pg. 9.

Lesson 2 : Surviving of Plants

- A. 1. F 2. T 3. F 4. T 5. T
- B. 1. Habitat 2. Terrestrial
3. insects 4. Papyrus
5. Bamboo
- C. 1. Wheat - grass family 2. paper - papyrus
3. Hydrilla - under water plant 4. Mushroom - non green plants
5. Cactus - desert plant
- D. 1. on land 2. nitrogen
3. all of these 4. evergreen
5. marshy areas
- E. 1. Teak 2. Hydrilla
3. Venus fly trap 4. Spruce tree
5. Rhizopora

Part 'B'

1. The change by which plants are able to change themselves slowly in order to live in their environment.
2. To easily cut down the snow during snowfall.
3. To keep the water clean.
4. Because leaves are modified into spine so loss of water is minimised.
5. They are useful to us in many ways—
(i) Cereal grains provide food for humans and animals
(ii) Bamboo is used for making brooms, baskets, chairs, mats etc.
(iii) Some grasses are used to make paper also.
- B. 1. Mango, banyan 2. Cactus, prickly pear
3. Wolfia, pistia 4. Venus fly trap, Sundew

Lesson 3 : Reproduction in Plants

- A. 1. T 2. F 3. F 4. F 5. T
- B. 1. eggs 2. hair
3. moulting 4. maggot
5. tadpole
- C. 1. Both of these 2. All of these
3. Both of these 4. Ostrich
5. Mammal

- D. 1. Snakes - Eggs 2. Butterfly - caterpillar
 3. Eggs of fish - spawn 4. Grass hopper - Nymph
 5. Birds - Encubation
- E. 1. Albumen 2. Cat
 3. Ostrich 4. Duck - billed platypus
 5. Reproduction

Part 'B'

- The process by which living beings produce their young ones of their own kind. Two ways :
 - By giving birth to young ones
 - By laying eggs.
- By laying eggs
- Moulting is shedding of old skin
- Eggs, larva, pupa, adult butterfly
- Mammals reproduce by giving birth to their young ones. They take care of their young ones by feeding cleaning and keeping them warm.

Lesson 4 : Adaptation in Animals

- A. 1. F 2. T 3. F 4. T 5. T
- B. 1. Omnivores 2. sucking
 3. amphibians 4. polar bear
 5. tail
- C. 1. Hibernation 2. Camels
 3. Ducks 4. Arboreal animals
 5. Birds
- D. 1. All of these 2. Both of these
 3. Aerial animals 4. Chameleon
 5. frogs
- E. 1. Chameleon 2. Eagle
 3. Frog 4. Gills
 5. Polar bear

Part 'B'

- It is the resemblance of animals to their natural surroundings to protect themselves from their enemies.
- It is the process of adjustment of an animal in a specific environment to meet the demands of food, shelter and reproduction.
- Animals that live mostly in air. Ex. Bat, crow.
- On land by lungs; In water by skin

5. (i) Thick and less hairy skin
- (ii) Broad and thick padded feet
- (iii) Water storage capacity

Lesson 5 : Food An Digestion

- | | | | | | |
|----|---------------------------|------|----------------------------|------|------|
| A. | 1. T | 2. F | 3. T | 4. T | 5. F |
| B. | 1. Cooking | | 2. balanced | | |
| | 3. faeces | | 4. Excretion | | |
| | 5. Proteins | | | | |
| C. | 1. Anaemia | | 2. Body building nutrients | | |
| | 3. Cold storage | | 4. Vitamins | | |
| | 5. Energy giving nutrient | | | | |
| D. | 1. All of these | | 2. 3-4 litres | | |
| | 3. All of these | | 4. Butter | | |
| | 5. Vitamins | | | | |
| E. | 1. Apple | | 2. Iron | | |
| | 3. Rice | | 4. Mouth | | |
| | 5. Salting | | | | |

Part 'B'

1. We need food to get energy which is needed for various activities and to remain fit and healthy.
2. Protein, fats, carbohydrates, vitamins and minerals.
3. To get more energy.
4. Because they protect the body from various diseases.
5. Digestion begins in the mouth as starch present in food is converted into sugar by the enzymes present in saliva. After the mouth, the food reached to stomach through food pipe. Stomach looks like a bag, where the food is partially digested. Then it goes into small intestine where it is completely digested with the help of enzymes secreted by liver and pancreas.
6. We cook food to make it soft, tasty and digestible. Methods of cooking food are — steaming, boiling, frying, roasting, baking.
7. Canning, salting, boiling and dehydration.

Lesson 6 : Teeth And Microbes

- | | | | | | |
|----|-------------------|---------|------------------|----------|------|
| A. | 1. F | 2. T | 3. F | 4. F | 5. T |
| B. | 1. teeth | 2. four | 3. viruses | 4. fungi | |
| | 5. micro organism | | | | |
| C. | 1. microbes | | 2. to grind food | | |

- 3. tooth decay
- 4. outer part of tooth
- 5. hard, whitish part of tooth
- D. 4. All of these 2. 6-8 months
- 3. 32 4. Acid
- 5. Protozoa
- E. 1. Measles 2. Tooth decay
- 3. Canines 4. Root
- 5. Six

Part 'B'

- 1. (a) Teeth help to bites and chew food web.
- (b) Adds charm to our face.
- (c) To speak properly.
- 2. Bacteria, virus, protozoa, fungi
- 3. (i) Incisors - To cut vegetables and food
- (ii) Canines - To sip or tear flesh
- (iii) Premolars - They act as nut crackers
- (iv) Molars - To grind the food
- 4. Care of the teeth (pg 46)
- 5. They are tiny organisms that are not visible by naked eyes.
They are useful to us in many ways :
(i) Yeast help in baking bread and making wines.
- (ii) Some bacteria can change milk into curd.
- B. 1. Crown, neck, root
- 2. Bacteria, fungi, protozoa, virus
- 3. Measles, malaria, typhoid, ringworm

Lesson 7 : Weather

- A. 1. weather 2. tilted
- 3. lighter 4. evaporation
- 5. shorter, cooler
- B. 1. F 2. T 3. F 4. T 5. T
- C. 1. Sea breeze 2. filtration
- 3. land breeze 4. humidity
- 5. lighter
- D. 1. Both 2. warmer
- 3. sedimentation 4. evaporation
- 5. All of these
- E. 1. Filtration 2. water-table
- 3. Condensation 4. Frost
- 5. Temperature

Part 'B'

1. It is the condition of the air that surrounds the earth.
2. The directly and slanting sun rays falling on earth as it rotates around the sun causes different seasons.
3. During the night, land cools quickly than the sea. Warm air above the sea rises cool air from land takes its place. This causes the breeze called land breeze. It is caused by hot and cold air known as convection current.
4. Sedimentation, decantation, filtration
Filtration - The water is filtered by using a funnel and a filter paper. The insoluble impurities is left behind on the filter paper and clear water is collected in the beaker.
5. Sunrays fall upon straight on the earth during the day.

Lesson 8 : Soil Erosion And Soil Conservation

- A. 1. layers 2. bed rock
3. silt 4. soil conservation
5. soil erosion
- B. 1. T 2. F 3. T 4. F 5. T
- C. 1. Three layers 2. Top soil
3. Soil conservation 4. Hills
5. Sub soil
- D. 1. (iv) all of these 2. (iii) both of these
3. (iv) all of these 4. (iii) three
5. (iii) both of these
- E. 1. soil erosion 2. loamy soil
3. planting more trees 4. terrace farming
5. soil profile

Part 'B'

1. It is formed by the breaking of rock into smaller pieces.
2. Removal of top soil by the action wind, water and ocean current etc is soil erosion.
main causes : water wind.
3. Different layers of soil :
 - (a) Top soil
 - (b) Sub soil
 - (c) Bed rockPlant and trees mostly grown in top soil.
4. The process of protecting soil from erosion.
5. (i) Planting trees (ii) Terrace farming

Lesson 9 : Solar System

- A. 1. Satellite
2. Sun
3. Venus
4. Sputnik I
5. Neptune
- B. 1. T 2. F 3. T 4. T 5. F
- C. 1. Shooting stars
2. Natural satellite
3. Artificial satellite
4. Rings
5. Largest planet
- D. 1. Mars
2. gravitational force
3. comet
4. 273 days
5. Both of these
- E. 1. Jupiter
2. Halley's comet
3. Aryabhata
4. Venus, mercury
5. Asteroids

Part 'B'

1. These are the heavenly bodies, that revolve around the sun. Mercury, venus, earth, mars, jupiter, saturn, uranus and neptune.
2. It is a solid heavenly body that revolves around a planet. Natural satellite of earth - Moon.
3. It is a space craft placed into orbit around a planet.
Uses :
 (i) For forecasting weather
 (ii) For conducting scientific experiments.
 (iii) To relay live programme on TV
4. Meteoros, comets, asteroids. (On page 69)

Lesson 10 : Solids, Liquids And Gases

- A. 1. Material
2. solids
3. gases
4. physical
5. oxygen
- B. 1. T 2. T 3. F 4. T 5. F
- C. 1. Chemical change
2. physical change
3. solute
4. solvent
5. fixed shapes fixed volume
- D. 1. Both of these
2. both of these
3. changing of milk into curd
4. solids
5. both of these
6. three
- E. 1. Water
2. Salt
3. Physical
4. Gases
5. Solution

Part 'B'

1. Anything that has mass and occupied space is called matter.
The three states of matter are — solid, liquid and gas.
2. A change in which no new substances are formed is called a physical change eg. Tearing of paper into pieces.
3. A change in which new substance are formed is called a chemical change eg. cooking of food.
4. Solute, solvent, solution. given on pg. 76.
5. The aquatic animals used dissolved oxygen in water for respiration.

Lesson 11 : Force, Work And Energy

- | | | | | | |
|----|------------------------|----------------------|----------------------|------|------|
| A. | 1. Energy | 2. Solar energy | | | |
| | 3. Atomic energy | 4. Mechanical energy | | | |
| | 5. Weight | | | | |
| B. | 1. T | 2. F | 3. F | 4. T | 5. T |
| C. | 1. Solar energy | 2. Geothermal energy | | | |
| | 3. Atomic energy | 4. A push or pull | | | |
| | 5. Mechanical force | | | | |
| D. | 1. Muscular force | | 2. increase friction | | |
| | 3. Solar energy | | 4. all of these | | |
| | 5. all of these | | | | |
| E. | 1. Coal | | 2. Rough grooves | | |
| | 3. Gravitational force | | 4. Geothermal energy | | |
| | 5. Scissors | | | | |

Part 'B'

1. A push or pull is called force. Frictional force, elastic force, muscular force, gravitational force.
2. Any tool or device which makes our work easier is called a machine. They are useful because they —
 - (a) makes work easier.
 - (b) increases the speed of doing work.
3. It is the ability or capacity to do work. Coal, oil, wood, sun atoms etc are different sources of energy.
4. (a) To reduce friction.
(b) Machine permits us to use less efforts.

Lesson 12 : Waste Material And Pollution

- | | | | | | |
|----|------|------|------|------|------|
| A. | 1. T | 2. F | 3. T | 4. F | 5. T |
|----|------|------|------|------|------|

- B. 1. rot
3. pollution
5. environment
2. non-biodegradable
4. environment
- C. 1. Biodegradable
3. Health hazard
5. Vehicles
2. Non-biodegradable
4. composite
- D. 1. (iv) all of these
3. (i) plants
5. (iv) all of these
2. (iv) all of these
4. (iii) watering plants

Answer in one word

1. Paper
3. Metal
5. Waste from factories
2. Plant
4. Loud speaker

Part 'B'

1. The environment is everything that is around us especially the air, water, soil, plants and animals.
Our health depends a great deal on the place that we live at, we need fresh air and pure water to live healthy.
2. The addition of unwanted things that are harmful to us is called pollution :
- (a) Water pollution
(b) Air pollution
(c) Noise pollution
3. Some kinds of rubbish decompose naturally and are called biodegradable eg. all food waste, plants.
Many of waste materials cannot decompose, we call such rubbish non-biodegradable eg. plastic, metal.
4. Industrial waste should be disposed off properly to avoid its harmful effects on environment.
(a) By planting more trees
(b) Minimise to burn the garbage
5. Recycling of rubbish means, when we reuse anything by any process to utilise it more is recycling of rubbish.

Model Test Paper - 1

- A. 1. (iii) both of these
3. (iii) Cow
5. (iv) All of these
2. (ii) 20
4. (iii) CO₂ + water
- B. 1. The process of making food by the plants with help of chlorophyll, sunlight and CO₂ + water.

2. For growth, to repair the damaged part and to get energy.
 3. To change themselves to survive in their surrounding environment.
 4. (i) Bamboo is used for making brooms, basket, chain, mats, etc.
(ii) Some grasses are used to make paper also.
 5. Animals reproduce by giving birth to their young ones.
 6. Bird reproduction by laying eggs.
 7. The animals that can live on land as well in water. ex. frog, toads.
 8. They protect us from various diseases and keep us fit and healthy.
 9. 20
 10. Microbes are micro-organisms that are not visible by naked eyes causing diseases in our body.
Some microbes are also useful to us.
- C. 1. T 2. T 3. F 4. T
5. F 6. F
- D. 1. Fungi 2. microbes
3. Proboscis 4. aquatic
5. carbohydrates 6. fats

Class 5

Lesson 1 : Reproduction in Plants

- A. 1. Reproduction 2. Plantation
3. Wind 4. Kharif
5. Proper
- B. 1. False 2. True 3. True 4. False
5. True
- C. 1. (iv) all of these 2. (ii) strawberry
3. (iii) both of these
- D. 1. Seed dispersal 2. Moisture
3. Wind 4. Rose
5. Tea
- Part 'B'
- A. 1. The process of producing of its own kind of race is known as reproduction.
2. Reproduction in plants in which only one parent is required is called asexual reproduction.
3. By leaves when fully burried into soil.

4. The process by which seed is formed.
 5. Crops which grow in winter as rabi crops e.g. wheat, pea.
- B. Answer the following in detail :
1.
 - i. Prepare the land and soil.
 - ii. Add manures, cow or buffalo dung and fertilizers to improve the quality of soil.
 - iii. Irrigate the soil well.
 - iv. Use healthy and ripe seeds of best variety for sowing.
 2. The process of travelling or scattering of seeds to different places :
Two methods : 1. wind; 2. water
 3. (a) They intake the carbon dioxide and provide us oxygen which is essential for our life.
(b) They provide us foods.
 4. Seeds are grains therefore should be stored in waterproof and insect proof storage bins where insects and other animals cannot reach.
 5. The development of a seed into seedling is called germination.
Conditions : water, air, warmth.

Lesson 2 : Varying Life-Styles of Animals

- A. 1. environment 2. oxygen, energy
3. lungs 4. gills
5. proboscis
- B. 1. True 2. False 3. True 4. True
5. False
- C. 1. Fins 2. cow 3. Tiger 4. spiracles
5. Scales
- D. 1. (i) fish 2. (iii) both of these
3. (ii) Rabbit 4. (i) Ducks
5. (iv) all of these
- E. Answer in one word :
1. Arctic term 2. Ostrich
 3. Turtles 4. Bat
 5. Amoeba

Part 'B'

- A. 1. The surroundings in which an animal live.
2. For doing different types of activities.
3. The periodic movement of animals from one place to another.
4. Animals that gnaw their food, eg. rabbits, rats.

Part 'B'

- A. 1. A group of organs together make up an organ system.
2. (i) The human skeleton is an engineering marvel. It gives shapes to the body.
(ii) It protect vital organs in our body from physical damage.
3. The human skeleton consists of the skull, the backbone, the ribs, girdles and limbs.
4. A joint is the meeting point of two bones held together by strong tissues called ligaments. Two types of joint are :
(i) Hinge joint (ii) Pivot joints
5. It is made of 12 pairs of long curved bones called ribs. All are joined at the backbone and the first ten pairs are joined in front to the breast bone. It protects heart and lungs.
- B. 1. Types of muscles :
(i) Voluntary muscles (ii) Involuntary muscles
(iii) Cardiac muscles
Voluntary muscles : page 29 (Below types of muscles)
Involuntary muscles : page 29 (Below types of muscles)
2. Three function of skeleton system.
3. The skull rest on backbone which is made up of irregular smaller bones termed vertebrae. There are 33 vertebrae.
4. The muscles occupy a major portion of our body. (page 28 last paragraph 4th line)
5. Because of the presence of immovable joint.

Lesson 4 : The Nervous System & Sense

- A. 1. Nerves 2. Brain
3. Iris 4. Taste-buds
5. Sounds
- B. 1. False 2. False 3. True 4. True
5. True
- C. 1. olfactory cells 2. optic nerves
3. spinal cord 4. Sensory nerves
5. Sensory receptors
- D. 1. Nerve cell 2. Medulla oblongata
3. both of these 4. Optic nerve
5. Pupil
- E. 1. Skin 2. Antiseptic solution
3. Eyes 4. Cerebellum
5. Motor nerve

Part 'B'

- A.
1. Nerves are like wires that link the body organs and muscles to the brain and spinal cord.
 2. (i) The brain gets its signal from various parts of body through nerves. It processes them and signals back for action in split second.
(ii) Sensing putting together, and responding.
 3. Everything that we know about the world; comes to us through our senses. We have five senses : sight, hearing, smell, taste and touch. The sense organs are eyes, ears, nose, tongue and skin.
 4. (a) Wash your eyes regularly with clean water.
(b) Always sit at least six feet away from TV.
 5. Tongue is covered with tiny little bumps called taste-buds. The taste buds send message to the brain about things that we eat or drink.
- B. In detail :
1. Different parts of brain :
(a) cerebrum (b) Cerebellum
(c) Medulla oblongata
Cerebrum : page 35 (2nd para)
Cerebellum : page 35 (2nd para)
Medulla oblongata : page 35
 2. The outer ear catches the sound. (page 38 1st para)
 3. Pg 37 (Human eye figure)
 4. Three kinds of nerve :
(a) Sensory nerve : page 34
(b) Motor nerve : Page 34
(c) Mixed nerves : Page 35
 5. The nervous system control (page 36)
Such action are controlled by spinal cord.

Class 5 : Food, Health And Diseases

- A.
1. Energy
 2. Minerals
 3. Exercise
 4. Vaccination
 5. Disease
- B.
1. True
 2. True
 3. False
 4. False
 5. True
- C.
1. Pasteurization
 2. Virus
 3. Vitamins
 4. Sources of proteins
 5. Immunity

- D. 1. All of these 2. Sea food
3. All of these 4. Tuberculosis
5. Bones and teeth
- E. 1. Malaria 2. Typhoid
3. Rickets 4. Exercise
5. Disease

Part 'B'

- A. 1. The diet that contain all the essential nutrients in proper amount.
2. Diseases caused due to the deficiency of minerals and vitamins in diet.
3. Muscles get relaxed by taking rest.
4. Page 43
5. To stay healthy
- B. 1. (a) Proteins : pulses, dalia ; body building
(b) Fats : ghee, butter; energy giving
(c) Carbohydrates : cereals; energy giving
(d) Vitamins : fruits and vegetables; protect the body
(e) Minerals : same above; same above
2. Common diseases : page 47
3. Page 48
4. Vaccination : Page 49
5. Bacteria, virus, protozoa and fungi. (Rest from page 47)

Lesson 6 : Air All Around Us

- A. 1. Atmosphere 2. Atmosphere
3. Ozone 4. Pollutants
5. Trees and plants
- B. 1. False 2. True 3. True 4. False
5. False
- C. 1. Air pressure 2. Air pollutant
3. Vertical layers 4. Photosynthesis
5. Thermosphere
- D. 1. Humidity 2. Troposphere
3. All of these 4. All of these
5. Troposphere
- E. 1. Nitrogen 2. CO₂ gas
3. Thermosphere 4. Air pollutants
5. Ozone

Part 'B'

- A. 1. CO₂, O₂, Neon, Argon, N₂.
2. (i) Air has weight
(ii) Air occupies space
(iii) Air exerts pressure
3. Atmosphere : Page 53
Layers : Troposphere, Stratosphere, Mesosphere,
Thermosphere
4. For photosynthesis
5. (i) Helps to fill ink in the fountain pen.
(ii) Syringe of doctor, works by air pressure.
(iii) We can sip softdrink by straw due to air pressure.
- B. 1. Air pollution : Page 57
2. Activity - 3 (page 56)
3. Ill effects of air pollution :
(i) It causes many diseases like asthma and lung cancer.
(ii) It spoils our clothes and blackens the buildings.
(iii) It reduces crop yield.
4. Four methods to prevent air pollution : Page 58
5. Respiration : The process by which exchange of gases like oxygen and carbon dioxide takes place and energy is released.
Glucose + oxygen — Energy + water + CO₂

Lesson 7 : Water

- A. 1. Water
2. Evaporation, distillation
3. Potassium permanganate
4. Potable water
5. Distilled
- B. 1. False 2. True 3. False 4. True
5. True
- C. 1. d 2. e 3. a 4. b
5. c
- D. 1. All of these 2. Both of these
3. Both of these 4. All of these
5. 20 minutes
- E. 1. Bacteria 2. Wells
3. Distilled water 4. Water
5. Solute

Part 'B'

- A. 1. Water, which is fit for drinking purpose is called as potable water.
2. Solute and solvent (page 62)

3. The impurities, that are soluble in water can be removed by evaporation, distillation.
 4. Impurities that are not soluble in water.
Sedimentation, decantation and filtration.
 5. Define (page 63).
- B.
1. To protect our body from disease causing germs. Two methods for purification :
(a) by adding chlorine gas,
(b) by boiling water.
 2. Page 64
 3. By filtration

Lesson 8 : Rocks And Minerals

- A.
- | | |
|---------------|------------|
| 1. Weathering | 2. Igneous |
| 3. Pumice | 4. Waste |
| 5. Rocks | |
- B.
- | | | | |
|---------|----------|---------|----------|
| 1. True | 2. False | 3. True | 4. False |
| 5. True | | | |
- C.
- | | |
|------------------|-----------------|
| 1. Igneous rocks | 2. All of these |
| 3. Mica | 4. All of these |
| 5. Lime stone | |
- D.
- | | |
|-------------------------|-------------------------------|
| 1. non-metallic mineral | 2. metallic mineral |
| 3. lime stone | 4. porous, light igneous rock |
| 5. Fossil fuel | |
- E.
- | | |
|---------------|----------------------|
| 1. Coal | 2. Metamorphic rocks |
| 3. Phosphorus | 4. Sand stone |
| 5. Obsidian | |

Part 'B'

- A.
1. Rocks are solid mass present under the soil and sand.
Types : Igneous, Sedimentary and Metamorphic rocks.
 2. Sedimentary rocks : Page 69
 3. Igneous rocks are formed by cooling and hardening of hot liquid rock material.
 4. Because they are formed from the fossils of the past ages.
 5. Metamorphic rocks : page 70.
- B.
1. Fuels that are from the fossils of the past ages. Example: coal, petroleum, etc.
Uses : coal : as fuel, to generate electricity.
Petroleum : As fuel, for drycleaning of expensive clothes.
 2. Page 73.
 3. Rocks are made of minerals groups; metallic (gold, and silver) and non-metallic (coal, sulphur).

4. Igneous rocks : Page 68
Example – granite, pumice etc.

Lesson 9 : States of Matter

- A. 1. Matter 2. Molecules
3. gas 4. solids
5. atoms
- B. 1. True 2. False 3. False 4. True
5. False
- C. 1. Miscible in water 2. Dissolved oxygen
3. Rust 4. 107 kinds
5. Chemical change
- D. 1. Solid 2. Gases
3. Kerosene 4. Both of these
5. Physical change
- E. 1. Physical 2. Atoms
3. Solids 4. Liquids
5. 3

Part 'B'

- A. 1. Matter : Anything that has mass and occupies space.
Three states of matter : (i) Solid – Wood (ii) Liquid – water
(iii) Gas – oxygen
2. Atom : Building block of matter.
Molecule : Two or more atoms combine to form a molecule.
3. Nitrogen, Oxygen and Carbon-dioxide, Ammonia gases can
be dissolved in water. Oxygen is utilized for breathing.

1.	Solid	Liquids	Gases
(a)	Molecules are very tightly packed	Not tightly packed	loosely packed
(b)	Force of attraction is maximum	Average	Minimum
(c)	Definite shape and volume	No definite shape but definite volume	No definite shape and volume
	Eg. wood, stone	eg. water, milk	eg. O ₂ , CO ₂

2. Page 79
3. Page 79
4. Because a new substance rust (iron oxide) is formed.

Lesson 10 : Force, Works And Energy

- A. 1. Effort 2. Inclined plans
3. Pulley 4. Buoyant force
5. Six

- B. 1. True 2. True 3. False 4. True
 5. True
- C. 1. Heavy load 2. Lever
 3. Effort 4. Buoyant force
 5. Measures density
- D. 1. Buoyant force 2. a nut cracker
 3. Both of these 4. Fixed pulley
 5. Wedge
- E. 1. Hydrometer 2. Volume
 3. Mercury 4. Gears
 5. Density

Part 'B'

- A. 1. The device that make our work easier is a simple machine. Eg. pulley, inclined plane.
 2. Volume : Space occupied by an object.
 Density : The mass per unit volume of a substance.
 3. Buoyant force : It is the upward push of water on a floating object.
 4. Fixed pulley and movable pulley
 (i) Use for drawing water (i) To lift the load from wells
- B. 1. Object having density less than water, float while those having density more than water sink.
 2. Because of difference in their volumes.
 3. Page 83-84.
 4. As buoyant force gives an upward push to floating object.

Lesson 11 : Shadows And Eclipses

- A. 1. Moon 2. Sun
 3. Directions 4. Reflected
 5. Weather
- B. 1. False 2. False 3. True 4. True
 5. True
- C. 1. Shadow 2. Craters
 3. dark glasses 4. Full moon night
 5. No moon day
- D. 1. Transparent 2. Three-fourth
 3. Low tides 4. Opaque
 5. Moon
- E. 1. Moon 2. Wall
 3. Aryabhata 4. Tide
 5. Air

Part 'B'

- A. 1. Due to the absence of air and water on the moon.

2. When path of light is obstructed by an opaque object, shadow is formed.
 3. Define : Page 91
 4. A solar eclipse occurs on a 'no moon' day but on every 'no moon' day, when the light of the sun is blocked by the moon.
 5. Surface of moon : page 90
- B.
1. Tides : Page 92
 2. Eclipse : Page 91
 3. Artificial satellites : Page 93
Uses :
 - (a) In forecasting weather
 - (b) To send TV programmes
 - (c) To locate natural resources present in the earth's crust.

Lesson 12 : Conservation of Natural Resources

- A.
- | | |
|--------------|-------------|
| 1. Conserve | 2. smoke |
| 3. renewable | 4. Terraces |
| 5. Forests | |
- B.
- | | | | |
|----------|---------|----------|----------|
| 1. False | 2. True | 3. False | 4. False |
| 5. True | | | |
- C.
- | | |
|-----------------------|----------------------------|
| 1. Terraces | 2. Makes soil fertile |
| 3. Renewable resource | 4. Extinction of wild life |
| 5. Soil erosion | |
- D.
- | | |
|-----------------|------------------|
| 1. All of these | 2. Both of these |
| 3. All of these | 4. Both of these |
| 5. All of these | |
- E.
- | | |
|----------------------|-------------|
| 1. Soil conservation | 2. Terraces |
| 3. Himachal Pradesh | 4. Forest |
| 5. Water | |

Part 'B'

- A.
1. **Conservation** : It is the protection of environment in such a way that prevents it from being damaged or destroyed.
 2. Lakes, rivers, pond, sea, oceans, wells and rain.
Uses :

(a) For drinking	(b) For watering plants
(c) Cooking food	(d) Washing and cleaning utensils
 3. (i) For drinking
(ii) For irrigation
(iii) For bathing
 4. Soil conservation : It is the protection of soil from being eroded.
 5. We should conserve water because it is a renewable resource and we cannot survive without it.

- B.
1. Because it is present in large amount in nature in different forms like glaciers, snow, rivers, sea, lakes, oceans etc. It keeps circulating in the atmosphere by water cycle.
 2. Soil can be conserved by : (Page 99)
 3. Forests are important for us because :
 - (a) They are natural homes of many animals.
 - (b) We get wood, paper, medicines, etc. from them.
 - (c) They help to bring rain.
 - (d) Helps to conserve ground water.
 4. Page 95

Model Test Paper – I

- A.
- | | |
|-----------------|------------------|
| 1. reproduction | 2. Rice |
| 3. Water | 4. floating ribs |
| 5. Cerebellum | 6. Rickets |
| 7. Distilled | 8. Water |
- B.
- | | | | |
|---------|----------|---------|----------|
| 1. True | 2. False | 3. True | 4. False |
| 5. True | 6. False | 7. True | 8. False |
- C.
- | | |
|----------------------|------------------------|
| 1. Goats, cows, etc. | 2. Black soil |
| 3. gills | 4. Spiracles |
| 5. Proboscis | 6. Lion, tiger, etc |
| 7. Hinge joint | 8. Sense organs |
| 9. Night blindness | 10. Most important gas |
- D
- | | |
|---------------|----------------|
| 1. Tadpole | 2. Capillaries |
| 3. Pollutants | 4. potable |
| 5. lava | |
- E.
- | | |
|-------------------|--------------|
| 1. Troposphere | 2. Beri-beri |
| 3. Whooping cough | 4. fish |
| 5. Rice | |

Part 'B'

1. Page 10
2. Page 18
3. Muscles contract and expand to allow movement of bones.
4. Page 34-35
5. Due to different taste buds present on it.
6. The diseases that can spread from sick person to a healthy person.
7. Uses : Page 57
8. (i) By planting more and more trees.
(ii) By using CNG vehicles.

Model Test Paper - II

- A. 1. Rocks 2. Haemetite
3. Solid 4. Moon
5. Silent 6. Resource
7. Water cycle 8. Soil conservation
- B. 1. True 2. True 3. False 4. True
5. False 6. True 7. False 8. True
- C. 1. Air pollution 2. Soil conservation
3. Artificial satellite 4. Natural satellite
5. Upward push 6. Reversible
7. Fossil fuel 8. Filtration
- D. 1. All of these 2. Both of these 3. Granite
4. Gases 5. Volume

Part 'B'

1. Page 68
 2. Because they are formed from the fossils of the past ages.
 3. Page 73
 4. The change which cannot be reversed and new substances are formed. Example : Burning of paper.
 5. Due to absence of air and water.
 6. Page 93
 7. Because :
 - (i) They give us useful things like wood, herbs, paper, medicine etc.
 - (ii) They help to conserve ground water and avoid soil erosion.
 8. Conservation : It is the protection of environment in such a way, that prevents it from being damaged or destroyed.
- B. Do your self.