

Answers

Chapter 1

MULTIPLE CHOICE QUESTIONS

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

VERY SHORT ANSWER QUESTIONS

7. (a) NECTAR (b) ARNIVORES
(c) HERBIVORES (d) OMNIVORES
8. Boiling kills the seeds.
9. In beehives.
10. (i) Salt from sea water/rocks
(ii) Water from river/well/tap/pond/tubewell/rain
11. (a) CHILLI; (b) FRUIT; (c) SOYABEAN;
(d) SUGAR; (e) GROUNDNUT

SHORT ANSWER QUESTIONS

12.

T	A	C	O	W	O	L	F
T	A	R	W	X	G	O	R
N	N	O	L	I	O	N	O
E	T	W	G	L	A	N	G
H	U	M	A	N	T	W	O

Herbivore: COW, GOAT, HEN

Carnivore: WOLF, LION, FROG

Omnivore: CAT, RAT, CROW, HUMAN, ANT, OWL

13. a- Flower: b- Bud: c- Leaf: d-Stem
14. **Hint:** Enough food is not available for all of us/Food is very costly and poor people cannot afford to buy/Any other reason.
15. Food gives energy to do work/to grow/to repair damaged parts, to protect the body against diseases.(any two)
16. a-(iii), b-(i), c-(iv), d-(v), e-(ii)

LONG ANSWER QUESTIONS

17. Eagle– birds/small animals/ meat/ others– Omnivore
Crocodile– fish/snake/animals living near the river banks of river– Carnivore
Elephant– grass/sugarcane/leaves/coconut/others– Herbivore
Crow– food grains/rat/meat/food items/insects– Omnivore
Lion– deer/rabbit/zebra/giraffe/cow/others– Carnivore
18. Any four correct answer.
Lion → goat, Lizard → insects, spider, Rat → grains; Snake → Rat, Goat → grain/grass, Spider → insects

19. **Hint:**

Food item	Ingredients
Dal	Pulses, water, salt, oil, spices.
Idli	Rice, urad dal, salt, water.

Any other item can be given as the answer.

Chapter 2

MULTIPLE CHOICE QUESTIONS

- | | | | |
|------|------|------|------|
| 1. d | 2. d | 3. b | 4. c |
| 5. c | 6. b | | |

VERY SHORT ANSWER QUESTIONS

7. (a) protein (b) minerals (c) vitamins
(d) carbohydrate (e) nutrients (f) fat
8. Water

SHORT ANSWER QUESTIONS

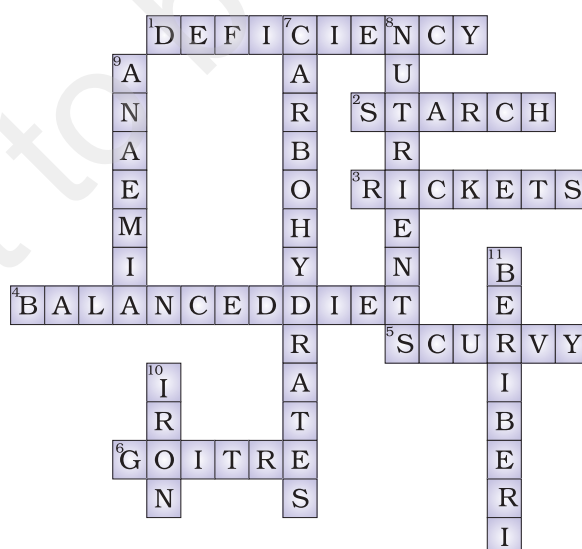
9. (a) fat, protein; (b) balanced diet; (c) obesity; (d) roughage;
(e) Vitamin C
10. A- sweet potato, rice, maize, white bread.
B- moong dal, fish, milk, egg, beans, butter milk, cottage cheese, peas.
C- mustard oil, milk, egg, butter.
11. Potato chips are tasty but they are not very nutritious.
Boiled vegetables are very nutritious but they may not be tasty.
12. The saree of Paheli's teacher might have been starched, and starch turns blue black with iodine solution. Paheli's socks did not have starch on it thereby showing no change.
13. Wash, peel, cut and cook the potatoes. Cooking in a small amount of water and then frying in a small quantity of oil conserves the nutrients.

14. Paheli must include whole grains, whole pulses, fresh fruits and vegetables in her diet as she seems to lack roughage.
15. (a) Components of food that provide nutrients are carbohydrates, proteins, fats, vitamins and minerals.
(b) Components of food that do not provide nutrients are water and roughage/dietary fibres.
16. Vitamins and minerals are very important because they help in
 - (a) protecting our body against diseases.
 - (b) growth.
 - (c) maintaining good health.
17. Water helps our body to absorb nutrients from food and also helps in removing wastes such as urine and sweat.

LONG ANSWER QUESTIONS

18. (a) Night blindness (b) Vitamin A
(c) Carrot, papaya, mango, milk and fish oil or any other (any four)

19.



20. (a) Chapati
(b) Calcium; Vitamin D
(c) Butter
(d) Protein; Calcium
(e) Papaya
(f) Iron
(g) Peas; Proteins
21. A snakes and ladders board-game prepared by children.

Chapter 3

MULTIPLE CHOICE QUESTIONS

- | | | | |
|------|-------|-------|------|
| 1. a | 2. b | 3. d | 4. c |
| 5. c | 6. c | 7. b | 8. c |
| 9. b | 10. b | 11. c | |

VERY SHORT ANSWER QUESTIONS

12. Yarn, fibres.
13. (a) cotton (b) spinning
(c) weaving (d) fibres
14. (a) False (b) False
(c) True (d) True

Correct statements

- (a) Silk is an animal fibre.
- (b) Jute is obtained from the stem of a plant.
15. Classify the following fibres as natural and synthetic.

Polyester, Jute, Silk, Nylon, Cotton, Wool

16. Cotton fabric does not shrink but silk fabric shrinks on burning.
17. Knitting.

SHORT ANSWER QUESTIONS

18. The end of the thread was separated into a few thin strands or the thread was quite thick.
19. Saree, dhoti, lungi, turban, dupatta, towel, etc.

20. (a) – (ii), (b) – (iii), (c) – (i), (d) – (iv)
21. black, warm, cotton bolls, ginning, spinning, dyed, woven
22. a – (v), b – (i), c – (vi), d – (ii), e – (iii), f – (iv)
23. Fabric, jewellery, hand-bag, carpet, mattress, gunny bag, cap or any other.

LONG ANSWER QUESTIONS

24. **Hint:** Cotton bolls → Cotton yarn → Cotton fabric
→ Cotton shirt
25. **Hint:** Describe weaving and knitting.

Chapter 4

MULTIPLE CHOICE QUESTIONS

- | | | | |
|------|-------|-------|------|
| 1. b | 2. c | 3. c | 4. c |
| 5. c | 6. b | 7. d | 8. c |
| 9. c | 10. d | 11. a | |

VERY SHORT ANSWER QUESTIONS

12. The silver spoon on long exposure to moist air has lost its shine and appears dull whereas gold does not tarnish.
13. Raveena has got a solution because honey will dissolve in water.
14. **Hint:** Yes, Ground glass is translucent, so Shikha can be located.
15. Cotton ball initially floats and then sinks as it absorbs water.

SHORT ANSWER QUESTIONS

16. Rubber band, leaf, eraser, cooked rice and fresh chapati are soft materials because they can be compressed or scratched easily.

17. **Soluble**

- (i) honey in water (ii) glucose in water
(iii) groundnut oil in mustard oil

Insoluble

- (i) turmeric in water (ii) rice flour in water
(iii) mustard oil in water

18. **Hint:**

Name of the material	Appearance Hard/Soft	Transparency (Transparent/ Translucent /Opaque)	Floats/Sinks in water	Soluble/ Insoluble in water
Lump of salt	Hard	Opaque	Sinks	Soluble
Green grass	Soft	Opaque	Floats	Insoluble

19. (a) aluminium – foil, aircrafts, etc.
 (b) plastic – bucket, pencil box, etc.
 (c) kerosene – fuel, solvent, etc.
 (d) vinegar – food ingredient, preservative, etc.
20. a- (iii) b- (iv) c- (i) d- (ii)
- 21.

O	S	T	P	L	E
A	T	L	E	E	R
C	O	I	N	A	A
O	N	K	C	F	S
A	E	E	I	W	E
L	L	Y	L	R	R

The answer may include other items as well.

LONG ANSWER QUESTIONS

22. **Hint:** Write on the basis of lustre, hardness, softness, roughness or smoothness.
23. **Hint:** Dissolved oxygen is available for animal and plants for respiration and survival.

24. **Hint:** Objects cannot be seen through opaque materials.

Example: Cardboard.

Objects cannot be seen clearly through translucent materials.

Example: Oiled paper.

Objects can be seen clearly through transparent materials.

Example: Hand lens

25. Soluble in water – Sugar, Salt, Honey, Copper sulphate crystals, Glucose

Insoluble in water – Mustard oil, Sand, Sawdust, Chalk powder, Soil, Petals of flower, Wheat flour

Chapter 5

MULTIPLE CHOICE QUESTIONS

- | | | | |
|------|-------|------|------|
| 1. d | 2. c | 3. b | 4. d |
| 5. d | 6. b | 7. b | 8. b |
| 9. c | 10. d | | |

VERY SHORT ANSWER QUESTIONS

11. **Hint:** Milk at higher temperature would dissolve more sugar so Ravi would win the game.
12. (i) hand picking; (ii) grains; (iii) sieving; (iv) sedimentation; (v) solid, liquid.
13. (a) False (b) True
(c) True (d) True
(e) True (f) True

SHORT ANSWER QUESTIONS

14. **Hint:** Winnowing. This method is based on the principle that the lighter particles are carried away by the wind.
15. (a) – (iii) (b) – (iv)
(c) – (v) (d) – (ii)
(e) – (i)

LONG ANSWER QUESTIONS

16. **Hint:**
- (a) They will mix salt with water to make salt solution.
- (b) Mohan's solution would be saturated because in Mohan's

case some salt would remain undissolved and settle at the bottom of the glass.

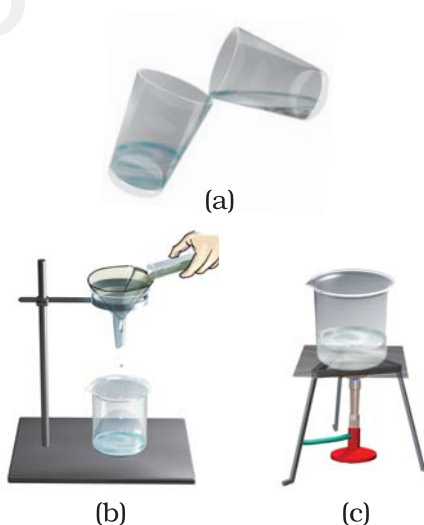
17. **Hint:**

- (i) Filtration using muslin cloth.
- (ii) Swirl with alum and leave water undisturbed for some time.
- (iii) Decantation.
- (iv) Boil for 10 minutes in covered pan.
- (v) Cool, filter and now it is fit for drinking.

18. (i) happy
(ii) Sun
(iii) threshed
(iv) winnowed
(v) handpicked
(vi) sieved

They got a good price as they used appropriate methods of separation to get good quality of flour.

19. **Hint:**



(a) Decantation – to separate oil

- (b) Filtration – to separate sand
- (c) Evaporation – to separate salt

20. **Hint:**

- (a) Iron nails – hand picking/magnet
- (b) Oil – decantation
- (c) Salt, water – evaporation and condensation

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Chapter 6

MULTIPLE CHOICE QUESTIONS

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

VERY SHORT ANSWER QUESTIONS

8. Melting of wax in (c), which on cooling changes back to solid wax.
9. The changes that can be reversed (reversible).
10. Expansion of metal cap on heating.

SHORT ANSWER QUESTIONS

11. (a) Yes, condensation (b) Yes, evaporation
(c) Yes, freezing (d) Not possible
12. (d), (f) and (g)
13. Boojho will not be successful, because making of toy from Plaster of Paris (POP) is a change that cannot be reversed.
14. We do get the paper on paper recycling but it is not the same original paper that we get. The colour and texture of the paper changes.

LONG ANSWER QUESTIONS

15. (a) Heating of an iron rod.
(b) Baking of chapati.
(c) Formation of ice from water.

(d) Formation of salt solution.

(e) Mixing of cement and water.

16. **Hint:** Different kinds; former can be reversed while the later cannot be reversed.

17. (i) Melting of wax (ii) Folding of a paper

(iii) Knitting of a sweater (iv) Inflating of a tyre

18. (i) Milk into curd (ii) Burning of wood

(iii) Ripening of fruits (iv) Digestion of food

19. Changes (i), (iii) and (iv) cannot be reversed, change (ii) can be reversed.

20. Activities (i), (iv), (v), (vi) and (vii) can be reversed and rest cannot be reversed.

Chapter 7

MULTIPLE CHOICE QUESTIONS

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

VERY SHORT ANSWER QUESTIONS

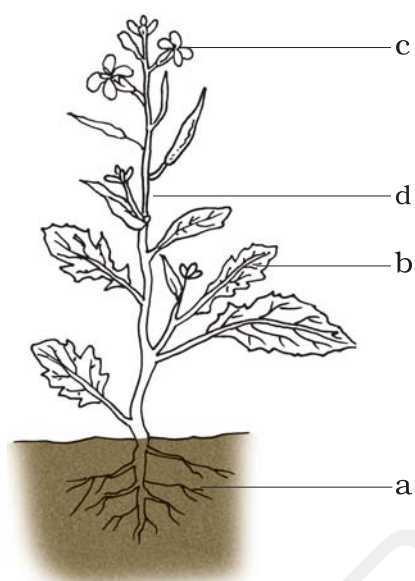
7. a– sepals; b– ovary, ovules; c– filament, anther; d– bud
8. (a) Herb or name of any small plant.
(b) Root; absorption of water and minerals.

SHORT ANSWER QUESTIONS

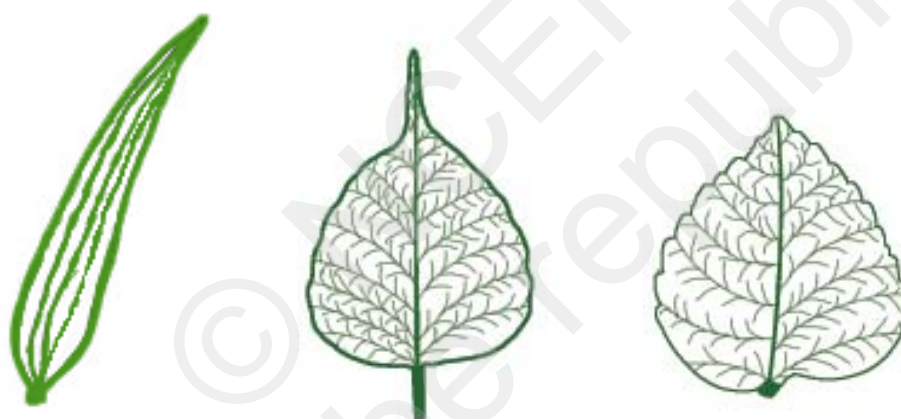
9. a– (iii); b– (ii); c– (iv); d– (v)
10. He did not boil the leaf in spirit to remove the chlorophyll.
11. No, all the starch stored in the leaf would have been used up by the plant. No starch would be synthesised afresh due to non-availability of sunlight.
12. **Hint:** Yes, water and minerals move upwards and food moves downwards.

LONG ANSWER QUESTIONS

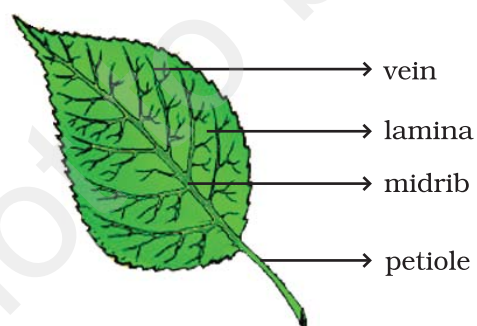
13. a– root; b– leaf; c– flower; d– stem



14.



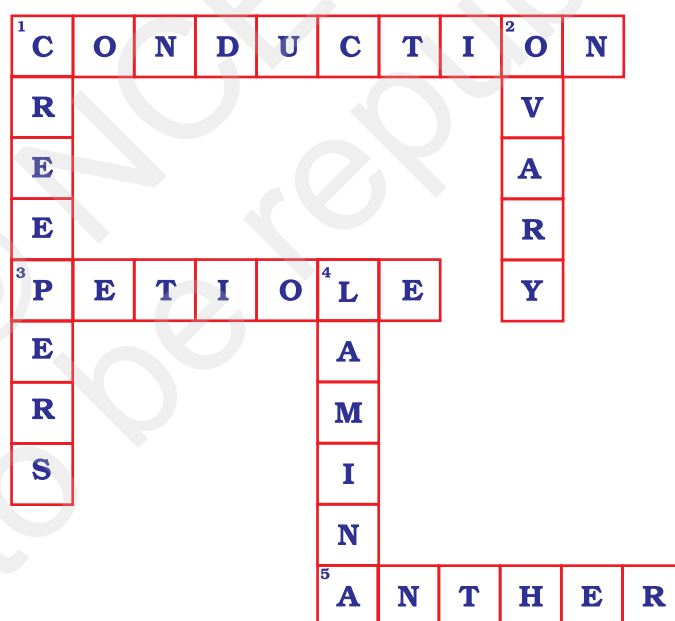
15. (a)



(b) Reticulate venation

(c) Parallel venation

16. (a) Transpiration.
 (b) On a bright sunny day.
 (c) Small drops of water inside the polythene cover.
 (d) The set-up must be airtight/polythene bag must be dry/ the twig must be fresh with 10-12 leaves.
17. (a) Wrong– Anther is a part of the stamen.
 (b) Wrong– The visible parts of a bud are the sepals.
 (c) Correct.
 (d) Wrong– Leaves also perform photosynthesis.
- 18.



19. (a)– sepals; (b)– petals; (c)– pistil; (d)– filament; (e)– anther;
 (f)– male; (g)– pistil; (h)– ovary; (i)– ovules

Chapter 8

MULTIPLE CHOICE QUESTIONS

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

VERY SHORT ANSWER QUESTIONS

7. Hinge joint.
8. We would not have been able to bend from our waist.
9. 1. Ball and socket
 2. Bone/s
 3. Upper jaw with skull
 4. Muscles
 5. Rib
 6. Skeleton
 7. Pelvic bones
 8. Pivotal
 9. Cartilage
10. (a) Ball and Socket joint
 (b) Pivotal joint
 (c) Hinge joint

SHORT ANSWER QUESTIONS

11. a– (iii) b– (v) c– (iv) d– (ii) e– (i)
12. (a) Duck – flying, walking, swimming

- (b) Horse – running, walking
 - (c) Kangaroo – jumping, walking
 - (d) Snail – creeping
 - (e) Snake – slithering
 - (f) Fish – swimming
 - (g) Human being – walking
 - (h) Cockroach – walking, flying
13. The doctor must have observed a swelling and taken an X-ray of the ankle. X-ray images confirm injuries/fractures in bones.
14. Elbow and knee are not made up of a single bone, but two or more bones which are joined to each other by a joint (Hinge joint). This joint along with the muscles help us to bend the elbow and knee.
15. (a) We would not be able to bend/fold our arms.
(b) We would be able to rotate our head 360° .
16. An earthworm eats its way through the soil. Its body excretes the undigested materials that makes the soil fertile.

LONG ANSWER QUESTIONS

17. (a) (i) bones (ii) movement (iii) contraction
(iv) muscles (v) cartilage (vi) shape
(vii) internal organs (viii) relaxation
- (b) (i) bones (ii) cartilage (iii) shape
(iv) movement (v) internal organs (vi) contraction
(vii) relaxation (viii) muscles

18.
 1. Bones are hollow and light.
 2. Bones of hind limbs are for walking and perching.
 3. Bones of fore limbs are modified as wings.
 4. Shoulder bones are strong.
 5. Breast bones hold flight muscles and are used to move the wings up and down.
19. A snake forms loops in its body while slithering. Each loop of the snake gives it a forward push by pressing against the ground. The snake with a large number of loops moves much faster than the snake with less number of loops. Thus snake "A" will move faster than snake "B".

Chapter 9

MULTIPLE CHOICE QUESTIONS

- | | | | |
|-------|-------|-------|-------|
| 1. d | 2. d | 3. a | 4. d |
| 5. a | 6. d | 7. c | 8. c |
| 9. d | 10. a | 11. d | 12. b |
| 13. a | | | |

VERY SHORT ANSWER QUESTIONS

14. (a) ADAPTATIONS (b) EXCRETION
(c) STIMULI (d) REPRODUCTION
15. (a) Grassland (b) Pond
(c) Mountain (d) Camel
16. Terrestrial habitats – grassland, rice field
Aquatic habitats – pond, ocean
17. Reproduction leads to the production of more individuals of an organism.
18. (a) abiotic (b) water (c) adaptations (d) terrestrial

SHORT ANSWER QUESTIONS

19. By planting stem-cutting of the rose plant.
20. As the deeper layers of sand are cooler, they burrow deep into the sand to stay away from heat of the desert during day time.
21. (a) Leaves are narrow and ribbon like.
(b) Stems/stalks of leaves are long, hollow and light.

22. (a) Long legs
(b) Webbed feet
(c) Blow holes
23. These are adaptations to dry conditions. As a result of these modifications the surface of lamina is reduced thereby reducing water loss by transpiration.
24. (a) Long ears to hear movement of predators.
(b) Eyes on the sides of its head which allow it to look in all directions.
25. (a) Desert plant (b) Aquatic plant
(c) Mountainous plants (d) Mountainous plant
(e) Desert plant (f) Aquatic plant

LONG ANSWER QUESTIONS

26. **Hint:**
1. Living organisms move on their own.
 2. Car moves by the burning of fuels like diesel and petrol.
 3. Car does not show any other living characteristics like respiration, digestion, reproduction, growth.
27. (a) Brown body colour helps it to hide in dry land avoiding detection by its prey.
(b) Eyes placed in front allow it to know the exact location and movements of its prey.
(c) Powerful paws and long claws help it to catch and kill the prey.

Chapter 10

MULTIPLE CHOICE QUESTIONS

- | | | | |
|--------|--------|--------|--------|
| 1. (d) | 2. (d) | 3. (c) | 4. (b) |
| 5. (c) | 6. (b) | 7. (c) | 8. (b) |
| 9. (d) | | | |

VERY SHORT ANSWER QUESTIONS

10. (i) The motion of a swing is an example of periodic motion.
or
The motion of a swing is not an example of rectilinear motion.
- (ii) $1\text{ m} = 100\text{ cm}$
11. (i) circular
(ii) periodic
(iii) straight; along
(iv) metre
12. (i) An object moving on a straight road, falling stone, etc.
(ii) A mark on blades of a rotating fan, tips of the hands of a clock, etc.
(iii) Motion of a child on a swing, motion of pendulum, strings of a guitar, etc.
(iv) Blades of a rotating fan, hands of a clock, etc.

SHORT ANSWER QUESTIONS

13. The length can be measured using a thread which can be further measured with the help of a scale.

14.

Y	O	U	N	G	C	C	N	T	E	R
L	E	V	E	L	P	I	E	E	A	R
A	L	L	O	T	O	P	P	E	A	I
N	O	T	E	P	A	D	N	E	C	K
O	W	O	N	E	W	I	Y	Z	S	E
I	E	V	O	R	L	O	A	D	W	P
T	R	G	N	I	C	E	D	R	I	L
A	Z	H	T	O	N	G	U	E	N	A
T	X	C	R	D	E	P	T	H	G	R
O	E	Y	C	I	R	C	U	L	A	R
R	T	L	C	C	O	P	P	E	R	T

15. Salim would get the most accurate length. The reason is that in this case the length of the table can be measured in one go because the measuring tape is longer than the table. In the other cases the chance of making an error is higher due to multiple measurement. In case of Sam, he can measure the lengths which are exact multiples of half a metre.
16. a- (ii); b- (i); c- (iii).

LONG ANSWER QUESTIONS

17. When we see the trees from a moving train, their position is changing with respect to us. Hence they appear to be moving. On the other hand the position of co-passengers is not changing with respect to us, hence they appear to be stationary.
18. **Hint:** The wheel of a moving bicycle depicts circular as well as rectilinear motion whereas a blade of a moving electric fan shows only circular motion.
19. **Hint:** Some of the reasons for difference in their measurement could be:
- Different measuring devices were used.
 - The smallest length that could be measured by different devices may be different.

- Measurement may not be along the shortest length in all three cases.
- The end of the corridor may not be easily accessible.
- The measuring devices may be faulty (not standardised)
- Any other correct reason.

(Any three can be considered)

20. **Hint:**

- (1) Handle bar or seat
- (2) Pedal
- (3) Wheel

Chapter 11

MULTIPLE CHOICE QUESTIONS

- | | | | |
|--------|--------|--------|--------|
| 1. (c) | 2. (b) | 3. (d) | 4. (a) |
| 5. (c) | 6. (c) | 7. (c) | |

SHORT ANSWER QUESTIONS

8. The image obtained will be the same in all the three cases.
9. A sheet of transparent material is placed at 'P'.
10. The light of torch at position C will not form a shadow of the ball on the screen.
11. No
12. (i) The colour of the shadow of an object does not depend on its colour.
(ii) Translucent objects allow light to pass through them partially or transparent objects allow most of the light to pass through them.
13. We can obtain more than one shadow of an object if light from more than one source falls on it. [For example during a match being played in a stadium, multiple shadows of players are seen].
14. No. Shadow of the bird can only be seen when the bird is flying very low close to the ground.
15. (i) By applying oil, grease, butter on it or pasting a butter paper on it.
(ii) Grinding (rubbing) the surface of the glass by any abrasive material.

16. $A \rightarrow a$
 $B \rightarrow b$
17. The colour of light will not affect the shadow, because shadow is the dark patch formed when an object obstructs the path of light and hence no light reaches in the shadow region.
18. Air around us is transparent but when thick smoke, thick clouds, etc. are present in the air it does not remain transparent.
19. The colour of shadows of all three towels will be the same.
20. The colours of the image of the shirts will be the same as the colour of the shirt.
21. The shadow formed will be dark and of the shape of the flower along with the stalk.

LONG ANSWER QUESTIONS

22. We can see the shadow of football lying on the ground because the ground acts as a screen for it. However, when the football is kicked high, the ground, which is acting as a screen is away from the football, hence no shadow of the football will be formed on the ground.
23. Some of the reason can be
- (i) The screen is away from the ball.
 - (ii) The beam of light from the torch is falling parallel to the screen on the ball.
 - (iii) The torch is kept away from the ball.
24. Shadow will not be formed in each case. Shadow will be formed by the sheet of plywood and the piece of muslin cloth.
- The sheet of plywood will form a dark shadow as it blocks the path of light completely.
- The piece of muslin cloth will form a lighter shadow as it allow light to pass through it partially.

Chapter 12

MULTIPLE CHOICE QUESTIONS

- | | | | |
|--------|--------|--------|--------|
| 1. (b) | 2. (a) | 3. (b) | 4. (c) |
| 5. (d) | 6. (d) | 7. (d) | |

VERY SHORT ANSWER QUESTIONS

8. In circuit A the cell will get used up rapidly.
9. Labels 3 and 4 mark the terminals of the bulb.

SHORT ANSWER QUESTIONS

10.



11. No the bulb will not glow in this circuit because the switch is open and the circuit is incomplete.
12. The reason could be because
 - (i) the bulb is fused.
 - (ii) the cell is a used one.
 - (iii) break in connecting wire.

(iv) loose connection.

(Any two)

13.



14. Rechargeable batteries can be recharged by providing them appropriate current.
15. No, Bulb A will not glow as the circuit is not complete.
16. Bulb has two terminals to connect the filament with the circuit so that the current can pass through it.
17. Arrangement A is not desirable and should not be set up. This will exhaust the cell very quickly.
18. In a fused bulb the filament is broken and the circuit is incomplete.
19. Yes. Aluminium foils can act as connecting wires.

LONG ANSWER QUESTIONS

20. Yes, using the arrangement given below he can succeed in getting the bulb glow.



21. (i) In Fig. (1) B to A

In Fig. (2) A to B

(ii) Yes

(iii) No

22. **Activity you perform**

Device

Get light

Torch

Heat water

Geyser/immersion rod

Make toast

Toaster

Cook food

Heater/microwave

Listen to music

CD player/radio/i-pod

23. The possible reason could be

(i) the bulb may be fused.

(ii) the cells may have been used up.

(iii) the cells are not placed in the correct order.

(iv) the switch is faulty.

(Any three)

Chapter 13

MULTIPLE CHOICE QUESTIONS

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

VERY SHORT ANSWER QUESTIONS

6. (i) two
(ii) more
7. The pins are made of stainless steel which is a non/magnetic material.
8. By using a magnet. If it has iron powder they will stick on to the magnet.
9. (1) The end of the magnet has more iron filings attached to it.
(2) These regions are called poles of the magnet.

SHORT ANSWER QUESTIONS

10. (a) A
(b) B because there are no iron filings sticking to it.
11. If the front of the toy car gets attracted to the north pole of the given magnet then it is the south pole of the bar magnet hidden inside the car.
12. (a) ii, iii and iv
(b) iii
(c) i
(d) iii

13. **Hint:**

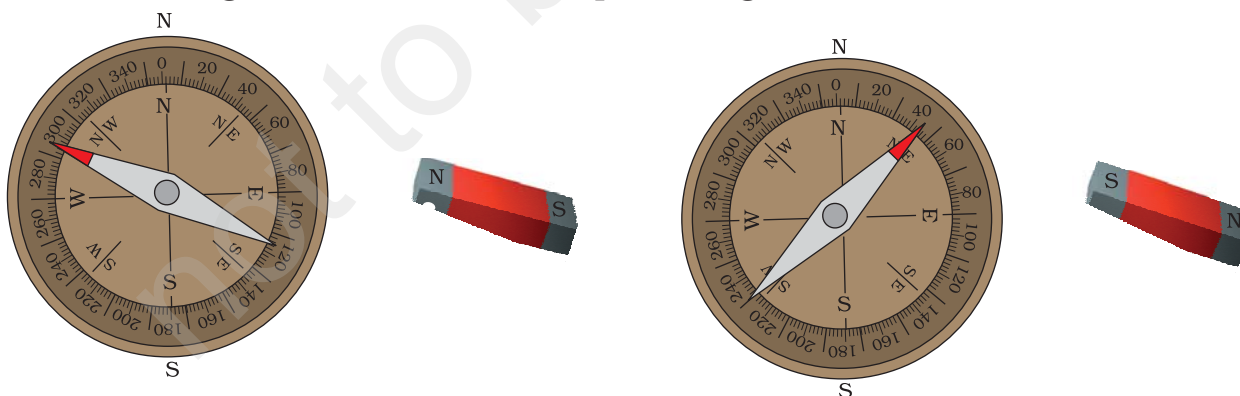
- (1) By suspending the metal bars
- (2) By attracting iron filings
- (3) Using another magnet

LONG ANSWER QUESTIONS

14. **Hint:** The magnet with known poles will attract and repel two ends of a magnet and attend both the end of an ordinary bar. (Test for repulsion)
15. **Hint:** By rubbing the iron with a magnet as shown in the figure below.



16. The magnetic needle of the compass will get deflected.



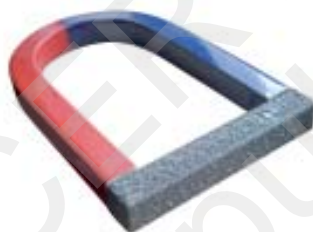
17. **Hint:** Magnetise the needle and set it in a way that it may rotate freely suspend it.

18. **Hint:** The magnetic properties are induced into the iron bar and it acts like a magnet till the magnet is kept near it.
19. **Hint:** By the test of repulsion

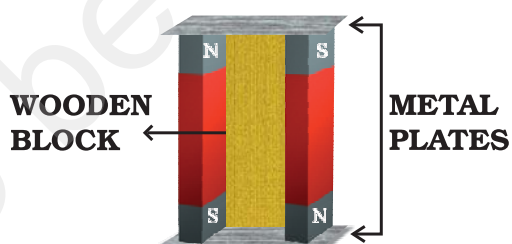


20. **Hint:**

U shaped magnet– One metal plate is placed across the two poles of the U shaped magnet.



Bar magnet– Use two metal plates and one wooden block, arrange them as shown in the figure



Chapter 14

MULTIPLE CHOICE QUESTIONS

- | | | | |
|--------|---------|--------|--------|
| 1. (d) | 2. (b) | 3. (c) | 4. (d) |
| 5. (c) | 6. (d) | 7. (a) | 8. (d) |
| 9. (d) | 10. (c) | | |

VERY SHORT ANSWER QUESTIONS

11. (i) Bathing
(ii) Washing clothes
12. (i) Washing 10 clothes
(ii) Irrigating a crop field
13. (i) Brushing your teeth
(ii) Washing a handkerchief

SHORT ANSWER QUESTIONS

14. Water present in wet clothes is converted into water vapour due to evaporation and leaves them dry.
15. Air around us gets heated from sunlight. This warm air provides heat for evaporation of water kept in the shade.
16. Areas covered with concrete reduce the seepage of rain water into the ground and this reduces the availability of ground water.
17. (i) Increasing population need more water.
(ii) Availability of water is decreasing day-by-day.
18. vapour, evaporation, transpiration, clouds, snow, rain.

LONG ANSWER QUESTIONS

19. **Hint:** Snow/Rain→Streams/Rivers→Sea/Ocean.
20. **Hint:** Draw diagram showing evaporation of water from sea, which form clouds in the sky. These clouds form rain. Rain water flows into lake or pond.
21. **Hint:** Water may be removed from the salt solution by heating it on a stove or keeping it in the sun in a plate for few hours.
22. **Hint:**



Chapter 15

MULTIPLE CHOICE QUESTIONS

- | | | | |
|--------|--------|--------|--------|
| 1. (d) | 2. (c) | 3. (d) | 4. (b) |
| 5. (a) | 6. (a) | 7. (c) | 8. (c) |

VERY SHORT ANSWER QUESTIONS

9. (a) True
(b) True
(c) False, air also helps in the flight of birds and aeroplanes.
(d) False, it does occupy space.
10. Flute, shahnai, harmonium.
11. (a) WINDMILL (b) OXYGEN
(c) SMOKE (d) DUST
12. (a) Oxygen and nitrogen together make up 99 per cent of the air.
(b) Aquatic animals use dissolved air for respiration.
(c) Air in motion is called wind.

SHORT ANSWER QUESTIONS

13. (a) wind (b) mixture (c) direction
(d) cylinders
14. (a) Mask
(b) To save himself from dirt/polluted air.
(c) Air quality of the place is not good. It is due to the smoke and gases emitted by the automobiles along with dust particles present in the air.

15. Air dissolved in water starts escaping in the form of tiny bubbles due to heat from the sun.
16. (a)– (iv); (b)– (iii); (c)– (v); (d)– (i); (e)– (ii)

LONG ANSWER QUESTIONS

17. **Hint:**
- (a) Lack of air movement.
 - (b) Shows the latest direction of the wind.
 - (c) Even the so called empty glass is not infact empty. It is filled with air.
 - (d) You may inhale dust if present in air which may prove harmful.
18. **Hint:**
- (a) There will be no life on earth.
 - (b) Things will burn very fast.
 - (c) The plants will not be able to prepare their food and hence there will be no life on earth.
19. (a) Tiny bubbles appeared due to the evolution of air dissolved in water.
- (b) No, tiny bubbles will not appear as there is no dissolved air in this water.
20. The road side plants had probably some dust and soot deposited on them and thus appeared dull.

Chapter 16

MULTIPLE CHOICE QUESTIONS

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

VERY SHORT ANSWER QUESTIONS

7. (i) vermicomposting
(ii) garbage disposal/landfill
(iii) recycle
8. (i) replace **industries** by **fields** or **agricultural fields**
(ii) change **water** and write **soil**
(iii) substitute **unused** by **used**
9. (a) Recycling (b) Garbage
(c) Vermicomposting (d) Landfill

SHORT ANSWER QUESTIONS

10. (i) Convert into compost.
(ii) Use as manure.
(iii) Recycle to make paper bags or paper pulp for handicrafts.
11. No. Use the paper for doing rough work or convert it into paper pulp to make a handicraft item.
12. (i) The waste that can be acted upon by bacteria or earthworms from those that cannot be degraded.
(ii) (a) any metal items
(iii) (b) Kitchen waste, animal dung (or named item)

13. (i) Fumes and gases from burning materials cause cough and breathing problem
(ii) Dry leaves can be used for making manure.

LONG ANSWER QUESTIONS

14. Tick (✓) against i, ii, iii, viii, x
Cross (×) against iv, v, vi, vii, ix
15. X because the kitchen waste and polythene bags are disposed of separately.
16. Step 1 = F, 2 = C, 3 = E, 4 = B, 5 = A, 6 = D
17. a. (i) Poor people or poverty
(ii) Removing the garbage generated by others.
(iii) Exposing himself to harmful substances.
(iv) Sorting out the recyclable waste.
- b. (i) Exposing cow to hazardous material.
(ii) Possibility of polythene choking the animal to death.
(iii) Incorrect/improper disposal of polythene by us.
- c. (i) Large quantity of waste generated.
(ii) Expecting others to clear the waste generated by us.
(iii) Unhealthy surrounding
(iv) Unpleasant sight
Any other.
18. **Hint:** Take help of elders or use internet.
19. Give your justification according to your stand if you are for or against the ban.

20. **Hint:**

- (a) They do not burn easily.
- (b) The burnt pieces may be eaten by cows and choke them.
- (c) The gases emanated prove to be a health hazard for humans.
- (d) The ashes left on burning are toxic.
- (e) Adds to soil pollution.

Any other

- 21.
 - (a) Clog pores in soil and may block pipes.
 - (b) Kill useful microbes which help purify water.
 - (c) Choke the drains.
- 22.
 - (a) Paper can be recycled, polythene bags do not degrade.
 - (b) Every member should do it.
 - (c) Earthworms. They convert waste from plants and animals or their product into compost.