CBSE

Class VI Science

Term 1

Sample Paper – 2 Solution

Time: 2 ½ hrs **Total Marks: 80**

SECTION A

1. **Ans.** Correct Option: [C]
   Solution: A flower bud is protected by green leafy structures called sepals. The sepals collectively form the calyx.

2. **Ans.** Correct Option: [D]
   Solution: Vitamin D is synthesised by exposing the bare skin to morning sunlight.

3. **Ans.** Correct Option: [D]
   Solution: Transpiration involves the release of water vapour from the leaves.

4. **Ans.** Correct Option: [C]
   Solution: Snakes do not have external limbs to crawl. Hence, they creep along the ground.

5. **Ans.** Correct Option: [C]
   Solution: Ulna and radius are the lower bones of the lower arm, the ulna being the longer and the larger of the two bones.

6. **Ans.** Correct Option: [B]
   Solution: A charkha is a hand-operated device used for spinning.

7. **Ans.** Correct Option: [A]
   Solution: The jute plant is cultivated in the rainy season as it needs plenty of water.

8. **Ans.** Correct Option: [B]
   Solution: Part 2 is made of metal.

9. **Ans.** Correct Option: [A]
   Solution: Chalk powder does not dissolve in water because it is insoluble in water.

10. **Ans.** Correct Option: [B]
    Solution: A piece of an iron rod is used to measure lengths and distances in straight objects.

11. Ans. Correct Option: [D]
Solution: A body is said to be in motion if its position changes with respect to a reference point.

12. Ans. Correct Option: [B]
Solution: Length of the box = (20 − 2) cm = 18 cm

13. Ans. Correct Option: [C]
Solution: Water is a transparent object as we can see through it.

14. Ans. Correct Option: [C]
Solution: A pinhole camera forms images which are upside down and laterally inverted. So, the observer will see a laterally inverted 9.

15. Ans. Correct Option: [A]
Solution: Light colours are good light reflectors. White colour reflects light the most.

SECTION B

16. Ans. Differences between a climber and a creeper:

Climber	Creeper
1. It readily climbs up to some neighbouring support.	1. It creeps along the soil surface and spreads on the ground over a long distance.
2. It has special organs called tendrils for climbing.	2. It does not have special organs like tendrils for climbing.
Examples: Pea plant and bottle gourd	Examples: Strawberry plant and money plant

17. Ans.

(i) The hip bones are called pelvic bones. They enclose the portion of our body below the stomach. They constitute the part of our skeleton which we sit on. The hip bones form a link between the upper part of the body and the legs.

(ii) The chest bones (ribs) and the backbone are joined to form a hollow, bony structure called the rib cage. The rib cage provides protection to some of the delicate internal organs of our body such as the heart, lungs and liver. It also takes part in breathing movements.

18. Ans.

- Cotton - Natural fibre
- Nylon - Synthetic fibre
- Acrylic - Synthetic fibre
- Wool - Natural fibre

19. Ans.

Transparent Materials	Opaque Materials
1. Materials which allow light to pass through are called transparent materials.	1. Materials which do not allow light to pass through are called opaque materials.
2. Examples: Glass, water	2. Examples: Wood, book

20. Ans. If we are sitting in a moving bus, then we are not changing our position in comparison to the things inside the bus. According to the definition of motion, we are not moving. The bus is moving. We can say that we are in motion in comparison to the outside trees and other buildings and stationary in comparison to things inside the bus.

21. Ans. A white paper has a rough surface (as seen through a microscope), so it reflects the light falling on it in all directions, i.e. it causes irregular reflection. So, we cannot see our image in a white paper.

22. Ans. Take a large sheet of cardboard and make a small pinhole in the middle of the sheet. Then, hold the sheet up in the Sun and let its shadow fall on a clear area. A small circular image of the Sun will be seen in the middle of the shadow of the cardboard sheet.

SECTION C

23. Ans. Roughage is the fibrous matter present in food which cannot be digested.

- **Functions of roughage:**
  It provides bulk to the food, keeps the food and waste matter moving along the intestines and helps to prevent constipation.
- **Sources of roughage:**
  Green vegetables, whole fruits and wholemeal flour products such as wholemeal bread, chapatti etc.

24. Ans.

(i) The leaves of the plant prepare food through the process of photosynthesis. During this process, the green leaves combine water and carbon dioxide from the air in the presence of sunlight and the green pigment chlorophyll to make food. Oxygen gas is released in the air.

$$\text{Carbon dioxide} + \text{Water} \xrightarrow[\text{Chlorophyll}]{\text{Sunlight}} \text{Food} + \text{Oxygen}$$

(ii) Difference between reticulate venation and parallel venation:

Reticulate venation	Parallel venation
1. The veins form a net-like design on both the sides of the midrib.	1. The veins run parallel to one another on both the sides of the midrib.
Examples: Marigold and Tulsi	Examples: Sugarcane and barley

25. Ans.

(i) Bristles are tiny hair-like projections present on the underside of an earthworm's body. They help the earthworm to get a good grip on the ground, which eventually helps in its movement.

(ii) A snail moves around with the help of a large, disc-shaped muscular foot. The alternate expansion and contraction of the muscles of the foot produce a kind of wave effect. A series of waves bring about the gradual movement of the snail's body.

26. Ans.

(i) A pivot joint is a joint which shows movement in the form of rotation. In a pivot joint, a cylindrical bone rotates in a ring.
Example: A pivot joint exists between our skull and the neck. It allows our head to bend 'up and down' and turn from 'side to side'.

(ii) Adaptations of birds which enable them to fly:
  (a) Bones are hollow and light.
  (b) Bodies are streamlined and extremely light.

27. Ans. Materials which cannot be easily compressed, cut, bent or scratched are called hard materials. Examples: Iron, glass
Materials which can be easily compressed, cut, bent or scratched are called soft materials. Examples: Sponge, cotton

28. Ans. We can distinguish between cotton, wool, silk and synthetic fabrics by performing the 'burning test'.

(i) If the piece of fabric burns vigorously with the smell of burning paper, then it is a cotton fabric.

(ii) If the piece of fabric burns with the smell of burning hair, then it is a woollen fabric.

(iii) If the piece of fabric burns with the smell of charred meat, then it is a silk fabric.

(iv) If the piece of fabric burns slowly with the smell of burning plastic, then it is a synthetic fabric.

29. Ans.

(i) The needle of a sewing machine has periodic motion.

(ii) metre (m): SI unit of length
second (s): SI unit of time
kilogram (kg): SI unit of mass

30. Ans.

(i) Emergency vehicles such as ambulances or fire engines use mirror images of the text written on them. This is done so that the driver of the vehicle in front of them reads the text correctly in the rear-view mirror and hence gives way to the ambulance or fire engine.

(ii) The property of light travelling in a straight line in a medium is called rectilinear propagation of light.

31. Ans. The image in a pinhole camera has the following characteristics:

(i) The image is inverted (upside down) as compared to the object.

(ii) The image is real because it can be formed on a screen.

(iii) The image is of the same colour as the object.

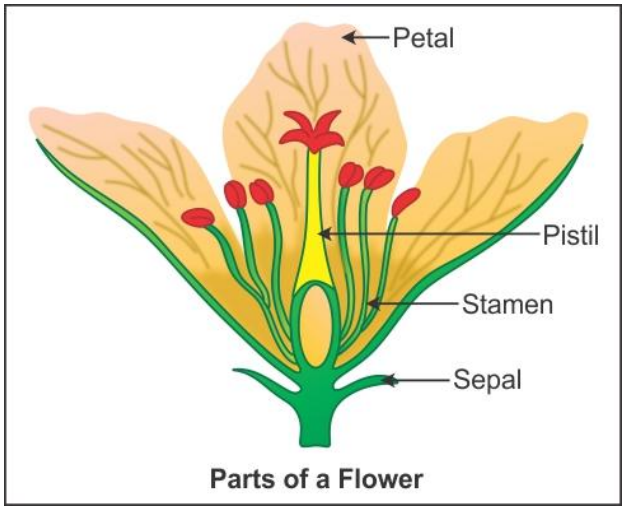
(iv) The image can be smaller than the object, equal to the object or bigger than the object, depending on the distance of the object from the pinhole camera.

SECTION D

32. Ans.

(i) The main parts of a flower are sepals, petals, stamen and pistil.

(ii) The main function of a flower is to produce fruits and seeds.



Parts of a Flower

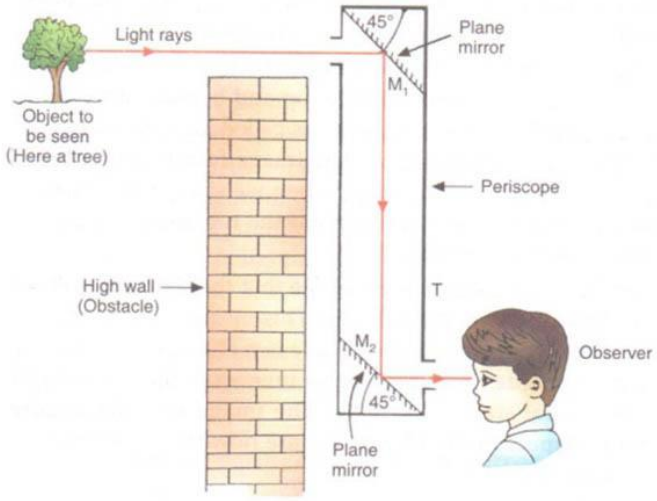
33. Ans.

(i) P: Carbon dioxide; Q: Oxygen; R: Nitrogen

(ii) S: Aquatic plants which use carbon dioxide dissolved in water to make their food.

(iii) Methane gas, like nitrogen, does not dissolve in water.

34. Ans.



The figure shows a tree behind a high wall which we cannot see directly. We can, however, see this tree by using a periscope as follows:

The upper hole of the periscope is turned towards the object to be seen (here a tree) so that mirror M_1 faces the object. We look into the periscope from the bottom hole in front of the lower mirror M_2. The light rays coming from the tree fall on the plane mirror M_1. The mirror M_1 reflects these rays of light towards the mirror M_2. The mirror M_2 then reflects the light towards the eye of the person looking into the periscope through the lower hole. Because the light rays coming from the tree enter the eye, it is possible to see the image of the tree in the lower mirror M_2 even though the tree cannot be seen directly.