

CLASS NOTES

Class: VI

Topic: Solution of worksheet based on
Ch-11: Light, shadows and reflection

Subject: Science

Question 1. State True (T) or False(F).

- (a) Light travels in straight line. **T**
- (b) A shadow can be colored. **F**
- (c) The image formed in pinhole camera is both erect and inverted. **F**
- (d) Transparent object does not cast shadows. **T**
- (e) A periscope is an instrument used for observing objects from a hidden position. **T**
- (f) Moon is a luminous object. **F**

Question 2. Choose the correct option:

- (i) Light travels in-
Answer- (a) straight line
- (ii) When an opaque object comes in the path of light it forms
Answer- (b) shadow
- (iii) Which letters of English alphabet will not show lateral inversion?
Answer- (a) I, O, U

Question 3. Write short answer.

1. Write down four man-made sources of light.

Answer – Electric bulb, torch, candle, oil lamp.

2. Does the fire emit light?

Answer – Yes, fire emits light.

3. Define : Opaque objects and Reflection of light.

Answer – Opaque objects- Opaque objects are something that allows no light through it. Concrete, wood, and metal are some examples of opaque materials.

Reflection of light- When light falls on a shiny surface, the light rays bounce back. This phenomenon is called reflection of light. Mirror is a surface from which most of the incident light gets reflected.

4. Whether a shadow is two-dimensional or three-dimensional?

Answer - Shadow is not just the two-dimensional outline that you see on the ground. All the space behind

the opaque object up to some distance behind it seems to be filled with the shadow.

5. What do we need in order to see a shadow?

Answer - We need-

- **A source of light**
- **An opaque object in the way of light**
- **A screen**

6. What is a shadow? How is it formed? How does the colour of an opaque object affect the colour of the shadow?

Answer - A shadow is a dark outline or image cast by an opaque object that blocks light coming from a source of light. It is formed when light hits the opaque object which does not let the light pass through. Everywhere else around the opaque object, the light continues in a straight path until it bounces off the ground or wall behind the object. The wall or ground behind the opaque object is the screen. On this screen is a dark patch, or shadow, with the same outline as the object surrounded by light. The colour of the opaque object does not affect the colour of the shadow that is formed.

7. Distinguish between

Answer - (a) luminous and non-luminous objects-

Luminous objects: Objects that give out or emit light of their own, e.g., sun, torch, light, bulbs, etc.

Non-luminous objects: Objects that do not give out light of their own, e.g., the moon, chair, shoe, pen, etc.

(b) shadow and image

| Image | Shadow |
|--|---|
| 1. Image is formed due to reflection or refraction of light | 1. Shadow is formed when light falls on the opaque body. |
| 2. Image is seen when light coming from the object after reflection or refraction enters the observer's eye. | 2. No light enters the eye from the shadow of the object. |
| 3. Image gives more information such as colour, structure, etc., about the object | 3. Shadow does not provide any detail about the object, it gives an idea about the shape of the object. |

Question 8. Match the following items given in Column A with that in Column B:

Answer –

| Column A | Column B |
|-----------------------|--|
| (a) Transparent | (iii) Object through which one can see clearly |
| (b) Opaque | (iv) Object through which one cannot see at all |
| (c) Translucent | (vi) Object through which we cannot see clearly |
| (d) Luminous body | (vii) Produces light of its own |
| (e) Shadow | (i) Region of absence of light |
| (f) Image | (v) Formed due to reflection by mirrors |
| (g) Reflection | (ii) Scattering back of the light by shining surface |
| (h) Lateral inversion | (viii) Phenomenon of changing left to right |

Answer 9. Fill in the blanks with appropriate words:

1. **luminous**
2. **screen**
3. **shadow**
4. **Upside down**
5. **Erect**
6. **Lateral inversion**
7. **Transparent**
8. **Big, small**
9. **Straight line**
10. **Three dimensional.**

Note: The above content is absolutely prepared at home.