Marks: 25 Time: 20 mins

Q1. Fill in the blanks:

1. An object or material could be opaque, transparent, translucent or___
2. A ……. is a dark outline of an opaque object that blocks light coming from a source.
3. Image formed by a pinhole camera is ……. .
4. Image formed by a plane mirror is ……. .
5. In a plane mirror, our left hand looks like right hand. This phenomenon is called …… .
6. …… objects cast no shadow.
7. Opaque objects cast ……. shadows in morning and evening while …… shadows at noon.
8. Light travels in a ……. . 8

Q2. Choose the correct option:

1. Which one of the following is the natural source of light?

(a) Electric bulb
(b) Sun
(c) Tube light
(d) Moon

2. Which of the following is a non-luminous object?

(a) Torch (b) Sun (c) Electric light (d) Chair

3. Substances through which light can pass partially and things cannot be seen clearly through them are –

(a) transparent (b) opaque (c) translucent (d) none of these

4. The shape of shadow depends upon the

(a) shape of the object
(b) size of the object
(c) size of source of light
(d) colour of the source light

5. The position of the shadow changes with-
(a) the position of the light source
(b) the movement of the light source
(c) both (a) and (b)
(d) none of these

6. Image formed by a pinhole camera is
(a) erect
(b) inverted
(c) sometimes erect, sometimes inverted
(d) none of these

7. Light travels in a-
(a) curved line
(b) straight line
(c) circle
(d) none of these 7

Q3. Source based question: Sarah is conducting an experiment with different objects to understand the properties of light. She has a wooden box, a glass pane, and a candle. She is using a source of light to observe the behavior of these objects.

1. What type of object is the wooden box in this scenario, and why?
2. If Sarah observes that she can see through the glass pane clearly, what type of object is it, and why?
3. How does the behavior of the candle differ from the wooden box and the glass pane in terms of emitting light? 5

Q4. Case based question:
Soumen's teacher asked their class to make a pinhole camera by themselves. Soumen read the activity given in his textbook on how to make a pinhole camera. But he was unable to get the image of a well-lit object. He was very upset. His elder brother on observing his pinhole camera found that the hole made by him was quite

large. He rectified Soumen's mistake and helped him making another pinhole camera. Now, Soumen can see the image of the object.

(a) On which principle of light does a pinhole camera works?
(b) Why was Soumen unable to get the image of a well-lit object?
(c) How does the formation of the image by a pinhole camera is affected by size of the hole? 3

Q5. Match the following:

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

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