Important Questions for CBSE Class 6 Science Chapter 11 – Light, Shadows and Reflections

VERY SHORT ANSWER TYPE QUESTIONS
1. Whether the moon is luminous or non-luminous body?Ans: Moon is non-luminous body.

2. What is umbra?
Ans: Umbra is the dark region behind object facing light which does not receive light at all.

3. How does a light ray travel?
Ans: Light ray travels in a straight line.

4. Give one natural source of light.
Ans: Sun is a natural source of light.

5. What is shadow?
Ans: Shadow is the dark space behind an opaque object where light does not reach.

6. What is penumbra?
Ans: The less darker shadow formed penumbra.on the periphery of dark shadow is called penumbra.

SHORT ANSWER TYPE QUESTIONS

1. State difference between a luminous and a non-luminous body.
Ans: The bodies which emit light are called luminous bodies. Example: sun, stars, burning candle etc.
The bodies which does not emit light are called non-luminous bodies. Example: moon, earth, blackboard.
2. Why is the moon not considered as a luminous body?
Ans: Moon is non-luminous body because it shines by reflecting the sunlight falling on it.

3. What is an incandescent body? Give example.
Ans: The bodies which emit light when heated to a very high temperature are called incandescent bodies. Example: electric bulb.

4. When does a shadow form?
Ans: Shadow is formed when light does not reach behind the opaque object kept in the path of light

5. Draw a diagram to illustrate the formation of umbra and penumbra.
Ans:

6. What are the essential conditions for the formation of shadow?

Ans:(1) There should be an opaque material.

(2) There should be a source of light and screen.

The object must be placed in the path of light. Then shadow is formed on the screen.

7. Define reflection of light.

Ans: When light rays after striking the smooth and shiny surface return to same medium, this phenomenon is called reflection of light.

9. How will you convert a glass sheet into a translucent sheet?

Ans: There are following two methods to convert glass sheet into a translucent sheet:

(i) By smearing a thin layer of oil on glass sheet.

(ii) By covering a side of sheet by butter paper.

10. What is shadow? How does the colour of an opaque object affects the colour of the shadow?

Ans: A dark outline or patch formed by an opaque object that blocks light coming from a source of light is called shadow. The colour of an opaque object does not affect the colour of the shadow.

11. Write the differences between umbra and penumbra.

Ans:

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

Ans: We need: (i) A source of light (ii) a screen (in) an opaque object.

13. What do you mean by scattering of light?

Ans: When a beam of light falls on a rough surface it is turned back in different directions. It is called scattering of light.

14. A and B are facing the mirror and standing in such a way that A can see B and B can see A. Explain this phenomenon.

Ans: The light rays from A falls on the mirror and gets reflected and reaches B, the light from B falls on the mirror and reflects to reach A. The path of light is just reversed as shown.

Ans: The size of the image will be same as the size of the object.

16.Write the mirror image of 'SMART'?

Ans: THAM8

17. Have you ever seen an ambulance? It is written in the form of mirror image on vehicles. Explain why it is done so and give the mirror image of AMBULANCE.

Ans: The mirror image of AMBULANACE is ECNALUBMA.

It is written so on the vehicles for the people to see in their rear view mirrors, read it correctly and immediately give way to the vehicle as it carries patients who need urgent medication.

18. You have to cost the shadow of your pencil on the wall with the help of candle in a dark room. How can you obtain the shadow of same size, small size and big size of the same pencil?

Ans: (a)The shadow of the pencil will be small when the pencil is taken close to the wall and away from the candle.

(b)The shadow will be big in size when the pencil is taken closer to the candle.

(c)To get the same sized shadow as the pencil is, adjust the distance between the wall, pencil and candle at equal distances.

LONG ANSWER TYPE QUESTIONS

1. What is reflection of light? Explain reflection of light with the help of an activity.

Ans: When light rays fall on a highly polished (e.g. mirror) smooth surface and return to the same medium, it is called reflection of light.

Activity to show reflection of light: This activity should be done at night or in a dark room. Ask your friend to hold a mirror in his hand at one corner of the room. Stand at another corner with a torch in your hand. Cover the glass of torch with your fingers and switch it on. There should be small gap between your fingers. Direct the beam of torch-light on to the mirror that your friend is holding. Adjust the direction of torch so that patch of light falls on your friend standing in the room. This activity shows the reflection of light also that light travels in straight line.

2. Explain the manner in which light travels with the help of an activity.

Ans: Take a comb and fix it on one side of a thermacol sheet. Fix a mirror on the other side as shown in figure. Spread a dark coloured sheet of paper between the mirror and the comb. Send a beam of light from a torch through the comb. You get a pattern of light similar to that shown in figure. This activity explains the manner in which light travels and gets reflected from a mirror.

3. Explain that light has the property of rectilinear propagation.

Ans: We take three pieces of cardboard. Place them one on the top of one another and make a hole in the middle of each cardboard by using a thick nail. Erect these cards up on the table at a short distance away from each other. Take a candle which is of the same height as the holes in the cards. Light the candle and place it in front of the cards. We see that the light of candle is visible only when the holes on cards lie in a straight line. If we disturb them the light of candle disappears. This experiment shows that light propagates in a straight line.