

St.Thomas School, Dhurwa, Ranchi.

Second Term 2021-2022

Std-4 Subject- Science Chapter-9 Light

Practice Paper -04 ( with model answer)

Q1. Write the scientific term for the following.

1. Something that gives out light.

**Ans-** Source of light.

2. Natural objects that give off light and are not made by man.

**Ans-** Natural sources of light.

3. Objects that give off light and are made by man.

**Ans-** Artificial sources of light.

4. An object which gives out its own light.

**Ans-** Luminous object.

5. An object which does not give out its own light.

**Ans-** Non-luminous object.

6. Thin beams of light which travel in a straight line.

**Ans-** Rays.

7. Propagation of light in a straight line.

**Ans-** Rectilinear propagation.

8. Bouncing off of light by objects.

**Ans-** Reflection of light.

9. Materials that allow all light to pass through them.

**Ans-** Transparent materials.

10. Materials that allow some light to pass through them

**Ans-** Translucent materials.

11. Materials that block light or do not allow light to pass through them.

**Ans-** Opaque materials.

12. A dark area formed when an object blocks the path of light.

**Ans-** Shadow.

Q2. Match the column. (straight matching)

Column A

Column B

- |                                   |                  |
|-----------------------------------|------------------|
| 1. travels in a straight lines(e) | (a) sun          |
| 2. opaque substance.(d)           | (b) butter paper |
| 3. translucent object.(b)         | (c ) clean water |
| 4. artificial source of light (f) | (d) stone        |
| 5. natural source of light(a)     | (e) light        |
| 6. Transparent. (c)               | (f) LED bulb     |

Q3. Choose the odd one out and write the category of others.

Term	Odd	Category of others
1. The sun, glow worms, candle, stars.	Candle (artificial source Of light )	Natural source of light.
2. Frosted glass, air, pure water, clear plastic.	Frosted glass (translucent)	Transparent material.
3. Firefly, tube light, moon, torch	moon (non- luminous)	Luminous objects
4. Wood, book, spectacle, rubber	spectacle (transparent)	Opaque objects

Q4. Write the differences between the following terms .

a) Natural source of light Artificial source of light

1 A natural object that has its own light is called a natural source of Light.  
 1. A man- made object which can give out light is called an artificial Source of light.

eg: The sun, stars  
 eg: an electric bulb,

b) Luminous objects Non- luminous objects

1. The objects that give out their own light are called luminous objects.  
 1. Objects that do not give out their own light are called non- luminous objects.

2. eg: The sun, electric bulb, candle, torch.  
 2. eg: The moon, blackboard, table, chair, tree.

(c) Transparent, Translucent and Opaque objects

<u>Transparent objects</u>	<u>Translucent objects</u>	<u>Opaque objects</u>
1. These objects allow all the light to pass through them and we can see through them. 2. <u>eg.</u> Clear glass, air, water.	1. These objects allow some light to pass through them and we can partially see through them 2. <u>eg:</u> Butter paper, tissue paper, frosted glass, honey	1. These objects do not allow light to pass through them at all and so we cannot see through them. 2. eg: metals, cardboard, rubber, book.

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Q5. Give reason.

**1. Spectacles are made of transparent glass or plastic.** Ans-

It is because transparent glass or plastic allows all the light to pass through them and we can see through them.

**2. We use frosted glass in the window panes in our bathrooms.**

Ans- It is because we do not want anyone to see inside, so we use frosted glass as they are translucent.

**3. We use curtains made of opaque cloth to cover the window panes at night.**

Ans- At night, we switch on the lights in our house and we do not want anyone from outside to see inside our house. So we use curtains made of opaque materials (cloth) to cover the window panes at night.

**4. Shadows are the longest during the morning and evening.**

Ans- This is because the rays of the sun are slanting during morning and evening.

**5. Shadows are shortest at noon.**

Ans- At noon, the sun is directly overhead so the shadow formed is the shortest.

**6. Why can't we see the lighted candle through a bent tube?**

Ans- This is because light can only travel in a straight line. It cannot travel in a bent tube to reach our eye.

**7. Why do transparent materials not form shadows?**

Ans. The transparent materials do not block the light from passing through it and so do not form any shadow.

**8. Why is it that translucent materials form lighter shadows whereas opaque materials form dark shadow?**

Ans-The translucent materials partially block the light and

thus form a lighter shadow. The opaque materials block the light completely and hence form a clear and dark shadow on the screen.

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