Properties of Light

A. Choose the Correct Answer:

1. Which of the following is a property of light?

A) Light cannot travel in a straight line

B) Light travels in a straight line

C) Light is always invisible

D) Light moves in circles

2. What happens when light passes through a transparent object?

A) It gets completely blocked

B) It bends and scatters in all directions

C) It passes through easily

D) It disappears completely

3. Which of the following is an example of a luminous object?

A) Moon

B) Sun

C) Mirror

D) Wooden table

B. Fill in the Blanks:

1. Light always travels in a _____ line.
2. A material that does not allow light to pass through it is called _____.
3. The process of light bouncing back from a surface is known as _____.

C. Case Study:

Ravi was playing with a torch in a dark room. He noticed that when he pointed the torch at a mirror, the light bounced back. However, when he pointed it at a wooden door, the light did not reflect in the same way. He also observed that when he shone the light through a glass window, it passed through easily.

Case Study Questions:

1. What property of light did Ravi observe when it bounced off the mirror?
2. Why did the light not reflect in the same way when it hit the wooden door?
3. What type of material is the glass window in this experiment?
4. Based on Ravi's observations, explain the difference between transparent, translucent, and opaque objects.

D. Short Answer Questions:

1. What is a shadow, and how is it formed?
2. What is reflection of light? Give an example.
3. Name three objects that are transparent, translucent, and opaque.

E. Long Answer Questions:

1. Explain how light helps us see things.
2. What is refraction of light? Describe with an example.
3. How does light interact with different materials? Explain with examples of transparent, translucent, and opaque objects.