

# Light

## 5. Higher order thinking skills.

1. A ray of light falling on a rough surface follows the laws of reflection but no image of the object placed before it is seen. Explain why it is so?

Ans: On a rough surface, reflected rays scatter in different directions due to irregular reflection. Because the rays do not remain parallel, a clear image is not formed.

2. Why does a ray of light passing through a glass slab not show dispersion?

Ans: Though dispersion occurs at the first surface, the colours recombine at the second surface of the slab. Hence, the emergent ray appears white and no dispersion is seen.

3. A ray of light from a point object diverges after reflection or refraction. Is the image formed real or virtual?

Ans: If rays diverge and do not actually meet, the image formed is virtual. Virtual images cannot be obtained on screen.

4. Will a spectrum be formed if a ray of monochromatic light falls on a prism? Explain.

Ans: No, a spectrum will not be formed because monochromatic light has only one colour. A spectrum requires light of many wavelengths.