

## Chapter 11

### Light Shadows and Reflection

**LUMINOUS OBJECTS** : Objects like the sun that give out or emit light of their own are called luminous objects.

#### TRANSPARENT, OPAQUE AND TRANSLUCENT OBJECTS

**TRANSPARENT OBJECTS** : If you can see clearly through an object, it is allowing light to pass through it and is transparent. For example specs.

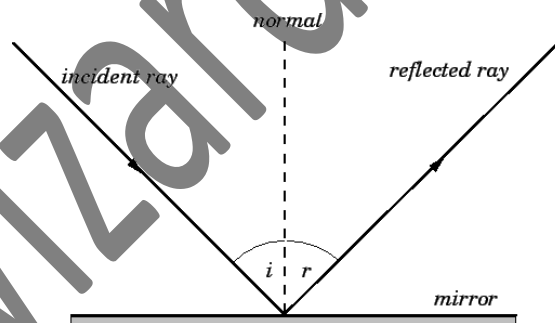
**OPAQUE OBJECTS** : If we cannot see through an object at all, it is an opaque object. Wood is an example of opaque objects.

**TRANSLUCENT OBJECTS** : There are some objects through which we can see, but not very clearly. Such objects are known as translucent.

**SHADOW** : Shadows are formed when an opaque object comes in the path of light.

**PINHOLE CAMERA** : Pinhole camera can be made with simple materials and can be used to image the Sun and brightly lit objects. Pinhole camera works because the **light travels along the straight path**.

**REFLECTION** : When light falls on a polished surface like mirror, the path/direction of light is changed, this is called Reflection. Mirror reflection gives us clear images.

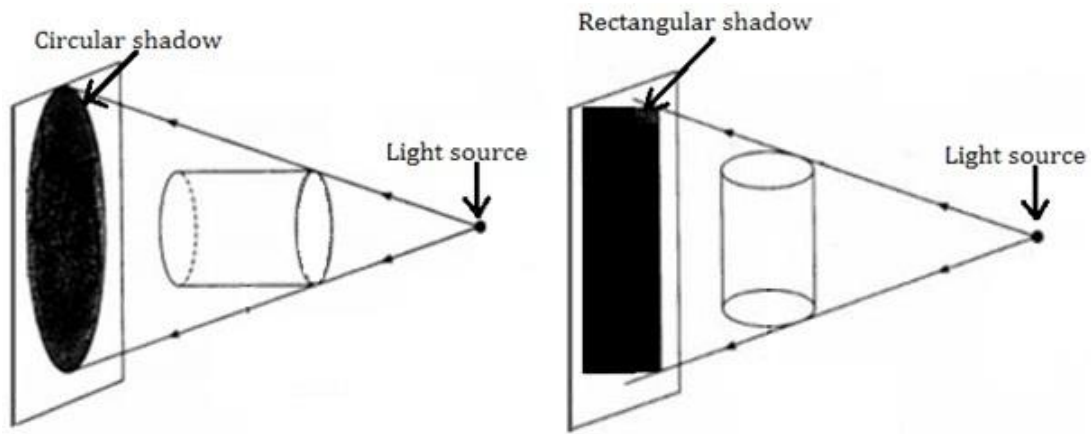


#### NCERT QUESTION-ANSWERS

**3. Can you think of creating a shape that would give a circular shadow if held in one way and a rectangular shadow if held in another way?**

**Answer.**

Yes, a cylindrical shape is the one that would give a circular shadow if held in one way and a rectangular shadow if held in another way. Its circular ends will form a circular shadow when kept in the way of light whereas its curved sides will give rectangular shadow.



4. In a completely dark room, if you hold up a mirror in front of you, will you see your reflection in the mirror?

**Answer.**

No, we will not see our reflection in mirror in a dark room because an image is formed only when the light gets reflected by the mirror whereas in a dark room, there is no light to cause reflection hence, no image will be formed.