

① Concave mirror are used in car headlamp  
Concave mirror has converging power  
It can concentrate the light ray at a  
particular point and in night we want highly  
concentrated light beam for clear visibility.

② The side mirror of scooter got broken.  
The mechanic replaced it with a plane  
mirror. Yes, the driver of the scooter  
will face any inconvenience while using  
plane mirror don't possess the quality of  
rear view mirror i.e. convex mirror.

③ The speed of travelling of light travelling  
through a vacuum is exactly  $299,792,458$  m per  
second.

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## Test Abhyas Science

④ A ray of light is incident towards a plane mirror at an angle of  $30^\circ$  with the mirror surface the angle of reflection will be  $60^\circ$ .

- ⑤
- Polished wooden table is smooth surface. Regular reflection <sup>takes place</sup>
  - Chalk powder has an irregular surface. Diffused reflection <sup>takes place</sup>
  - Cardboard has irregular surface. Diffused reflection takes place.
  - A marble floor with water is a smooth surface regular reflection takes place.
  - Mirror has smooth surface. regular reflection takes place.
  - Piece of paper may appear smooth but it has many minor irregularities. Diffused reflection takes place.

⑥ The **kaleidoscope** uses mirrors. as light bounces off different mirrors, the eyes see the bouncing reflection, creating patterns. and when the kaleidoscope rotates the tiny object inside shifts the chambers and as result our eyes.

⑦ The light rays from the object undergo reflection at each mirror surface and emerges out.  $\therefore$  The light ray undergoes 10 reflection.

• When the student view the object through periscope the image will be bright. whereas, intensity of image

observed through a number of number of

⑧ Characteristics of upright, the mirror size of as

⑨ Diffused regular reflection and not of reflection

⑩ Incident AB is

• Normal -

• The point of a mirror

a plane  
the mirror  
will be  $60^\circ$ .

Regular Reflection  
reflection takes place  
regular

reflection

has many  
places.

light bounces  
on the  
inside surface.

reflection  
The light

through periscope  
visibility of image

observed through the periscope formed by joining  
a number of periscope's less - due to large  
number of reflection at mirror surface.

⑧ Characteristics ~~are~~ of plane mirror - virtual,  
upright, left - right, the same distance from  
the mirror as object's distance, and same  
size ~~of~~ as the object.

⑨ Diffused reflection is just the opposite of  
regular reflection. The light rays reflected in  
a regular reflection will be in different direction  
and not parallel to each other. Hence, the laws  
of reflection do not fail for diffused  
reflection.

⑩ Incident ray - The ray of light falling on surface  
AB is called the incident ray.

• Normal - ray that is incident at  $90^\circ$  to a surface.

• The point at which incident ray falls on surface  
of a mirror is called point of incidence.

