

CASE STUDY QUESTION 06

Read the following and answer any four questions from (i) to (v)

Rear view mirror is a device that allows the driver to see rear ward. It usually finds its place at the top of windscreen in side the cabin. This device is one of the most basic but essential safety devices in the vehicle. It provides assistance to the driver during overtaking, parking in reverse gear etc. Generally, vehicles also have a pair of mirrors attached to the body from outside. They are popular as 'side mirrors' or Outer Rear View Mirrors (ORVM) which serve the same purpose. Almost all modern cars mount their side mirrors on the doors-normally at A-pillar rather than the wings (the portion of the body above the wheel well).



(i) A real image of an object is to be obtained. The mirror required for this purpose is :

- (a) convex mirror
- (b) concave mirror
- (c) plane mirror
- (d) either convex or concave mirror

Ans: (b) Concave mirror

(ii) A boy is standing in front of and close to a special mirror. He finds the image of his head bigger than normal, the middle part of his body of the same size, and his legs smaller than normal. The special mirror is made up of three types of mirrors in the following order from top downwards:

- (a) Convex, Plane, Concave
- (b) Plane, Convex, Concave
- (c) Concave, Plane, Convex
- (d) Convex, Concave, Plane

A plane mirror will produce an image of the same size.

A concave mirror will produce a magnified image.

A convex mirror will produce a diminished image.

Ans: (c) Concave, Plane, Convex

(iii) A convex mirror is used:

(a) by a dentist

(b) for shaving

(c) as a rear view mirror in vehicles

(d) as a light reflector for obtaining a parallel beam of light

Ans: (c) as a rear view mirror in vehicles

(iv) Linear magnification (m) produced by a rear view mirror fitted in vehicles :

(a) is equal to one

(b) is less than one

(c) is more than one

(d) can be more or less than one depending on the position of object

Ans: (b) is less than one

(v) A concave mirror cannot be used as :

(a) a magnifying mirror

(b) a torch reflector

(c) a dentist's mirror

(d) a rear view mirror

We cannot use a concave mirror as a rearview mirror in motor vehicles.

This is because a concave mirror produces inverted images (upside down images) of distant objects.