

Questions

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5. No matter how far you stand from a mirror, your image appears erect. The mirror is likely to be

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

Answer –

(d) The mirrors are likely to be either plane or convex

6. Which of the following lenses would you prefer to use while reading small letters found in a dictionary?

- (a) A convex lens of focal length 50 cm
- (b) A concave lens of focal length 50 cm
- (c) A convex lens of focal length 5 cm
- (d) A concave lens of focal length 5 cm

Answer –

(b) A convex lens of focal length 5 cm can be used while reading small letters found in a dictionary

7. We wish to obtain an erect image of an object, using a concave mirror of focal length 15 cm. What should be the range of distance of the object from the mirror? What is the nature of the image? Is the image larger or smaller than the object? Draw a ray diagram to show the image formation in this case.

Answer-

Range of the distance of the object = 0 to 15 cm from the pole of the mirror.

Nature of the image = virtual, erect, and larger than the object.

8. Name the type of mirror used in the following situations.

- (a) Headlights of a car
- (b) Side/rear-view mirror of a vehicle
- (c) Solar furnace

Support your answer with a reason.

Answer-

(a) Concave Mirror: Concave mirrors can produce a powerful parallel beam of light when the light source is placed at their principal focus.

(b) Convex Mirror: Because of its largest field of view.

(c) Concave Mirror: Because it concentrates the parallel rays of the sun at a principal focus.

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