

LIGHT : REFLECTION

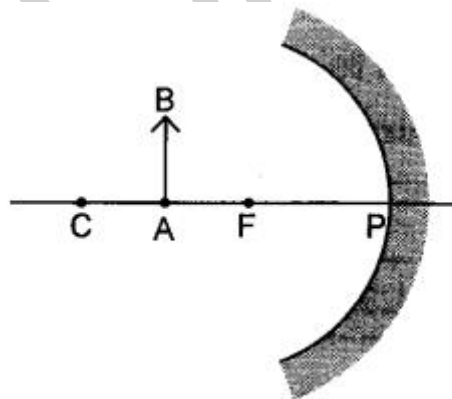
SHIKSHA GHAR

LONG ANSWER TYPE QUESTION [5 Marks]

1. Draw the ray diagram in each case to show the position and nature of the image formed when the object is placed:
 - (i) at the centre of curvature of a concave mirror
 - (ii) between the pole P and focus F of a concave mirror
 - (iii) in front of a convex mirror
 - (iv) at 2F of a convex lens
 - (v) in front of a concave lens
2. It is desired to obtain an erect image of an object, using a concave mirror of focal length 20 cm.
 - (i) What should be the range of distance of the object from the mirror?
 - (ii) Will the image be bigger or smaller than the object?
 - (iii) Draw a ray diagram to show the image formation in this case.

VERY SHORT ANSWER TYPE QUESTIONS [1 Mark]

1. Draw the following diagram in your answer book and show the formation of image of the object AB with the help of suitable rays.



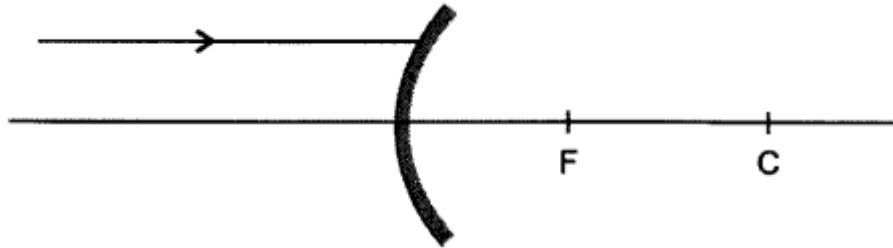
2. Which kind of mirrors are used in the headlights of a motor-car and why?



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3. Redraw the diagram given below in your answer book and show the direction of the light ray after reflection from the mirror.



VERY IMPORTANT Qs

4. What is the minimum number of rays required for locating the image formed by a concave mirror for an object. Draw a ray diagram to show the formation of a virtual image by a concave mirror.
5. Explain why a ray of light passing through the centre of curvature of a concave mirror, gets reflected along the same path.
6. Between which two points related to a concave mirror should an object be placed to obtain on a screen an image twice the size of the object?
7. State the two laws of reflection of light.
8. Define and show on a diagram, the following terms relating to a concave mirror:
 - (i) Aperture
 - (ii) Radius of curvature
9. Define the focus of a concave mirror. If the radius of curvature of a convex mirror is 30 cm, what would be its focal length?
10. Distinguish between a real and a virtual image of an object. What type of image is formed (i) by a plane mirror, (ii) on a cinema screen?
11. List four properties of the image formed by a plane mirror.
12. Name the type of mirror used in the following situations:
 - (i) Headlights of a car
 - (ii) Rear-view mirror of vehicles
 - (iii) Solar furnace
 Support your answer with reason.



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