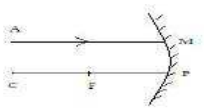
BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

CLASS-X

LIGHT

Q1 A ray of light AM is incident on a spherical mirror as shown in the diagram. Redraw the diagram and show the path of reflected ray.



Q2 Explain why a ray of light passing through the centre of curvature of a concave mirror gets reflected along the same path?

Q3 What is the radius of plane mirror?

Q4 Why do we use convex surface for side view mirror?

Q5 Relate the focal length '*f* ' and the radius of curvature 'R'.

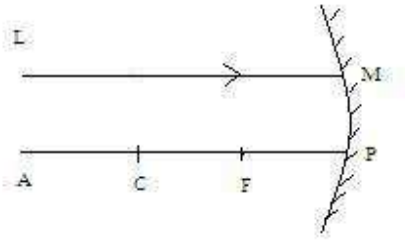
Q6 Which kind of mirror is used in the headlights of a motor car and why?

Q7 What is focal length of a plane mirror?

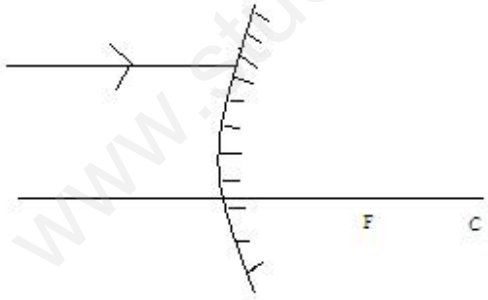
Q8 A concave mirror is placed in water. Will there be any change in the focal length? Give reasons.

Q9 Name the type of mirror which always forms a virtual and diminished image.

Q10 A ray of light LM is incident on a mirror as shown in the figure. The angle of incidence for the ray is the angle between it and the line joining the other points in the figure. Name these two points.



Q11 Show the direction of the light ray after reflection from the mirror.



Q12 Can a virtual image be photographed?
Q13 Locate the position of image formed by a concave mirror if the object is at 2F or C.

Q14 Find the focal length of a convex mirror whose radius of curvature is 32cm.

Q15 Name the type of mirror used in:

(a) Solar furnaces
(b) Rear view mirror of a vehicle
(c) Headlights of a car.

Support your answer with reason.

Q16 Draw the ray diagram to show

(i) the position
(ii) nature of the image formed

when an object is placed between focus F and pole P of a concave mirror.

Q17 A concave mirror and a convex lens are held separately in water. What changes (if any) do you expect in the focal length of either?

Q18 A convex mirror used on an automobile has a focal length of 3m. If a vehicle behind is at a distance of 5m, find the location of the image.

Q19 (i) Distinguish between a real and virtual image.
(ii)Distinguish between a convex and concave mirror.

Q20 We have to form an erect image of an object placed in front of a concave mirror of focal length 15cm. Draw the ray diagram.

Q21 Why does a ray falling normally on a plane mirror, retrace its path?

Q22 How do we locate the position of an image in a plane mirror? Show with an example.

Q23 Whatever may be the position of object, the image appears to be erect. Give the nature of mirror with reason.

Q24 From which surface of a mirror, the polished surface or the silvered surface, does most of the light reflect?

Q25 Draw a diagram showing the pole, focus, centre of curvature and principal's axis of a concave mirror.

Q26 Convex mirrors are used as rear view mirrors in scooters, motorcycles etc. Expalin why?

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