1. If an object is placed at a distance of 10 cm in front of a plane mirror, how far would it be from its image?
2. State four characteristics of the image formed in a plane mirror.
3. The radius of curvature of a spherical mirror is 20 cm. What is its focal length?
4. Out of convex mirror and concave mirror, whose focus is situated behind the mirror?
5. Which mirror always produces a virtual, erect and diminished image of an object?
6. Explain why, convex mirrors are used as rear-view mirrors in vehicles.
7. A concave mirror produces three times magnified real image of an object placed at 10 cm in front of it. Where is the image located?
8. A converging mirror forms a real image of height 4 cm of an object of height 1 cm placed 20cm away from the mirror. Calculate the image distance. What is the focal length of the mirror?
9. An arrow 2.5 cm high is placed at a distance of 25 cm from a diverging mirror of focal length 20 cm. Find the nature, position and size of the image formed.
10. An object 5 cm high is placed at a distance of 10 cm from a convex mirror of radius of curvature 30 cm. Find the nature, position and size of the image.
11. If a ray of light goes from a rarer medium to a denser medium, will it bend towards the normal or away from it?
12. What is the cause of refraction of light?
13. What happens when a ray of light is incident normally on a rectangular glass slab?
14. A convex lens produces an inverted image magnified three times of an object placed at a distance of 15 cm from it. Calculate focal length of the lens.
15. A 2.0 cm tall object is placed perpendicular to the principal axis of a convex lens of focal length 10 cm. The distance of the object from the lens is 15 cm. Find the nature, position and size of the image. Also find its magnification.
16. A concave lens has focal length of 15 cm. At what distance should an object from the lens be placed so that it forms an image at 10 cm from the lens? Also find the magnification of the lens.
17. The focal length of a diverging lens is 15 cm. At what distance should an object be placed from this lens so that it forms an image at 10 cm from the lens? Also calculate the magnification. What is the nature of the image formed?
18. A concave lens of focal length 25 cm and a convex lens of focal length 20 cm are placed in contact with each other. What is the power of this combination? Also, calculate focal length of the combination.