



ESSENCE TEST-9

DATE : 25-08-19

10TH CLASS

CBSE(B3)

REFLECTION OF LIGHT

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MULTIPLE CHOICE QUESTIONS

[1×20=20]

- Focal length of plane mirror is
 - At infinity
 - Zero
 - Negative
 - None of these
- Image formed by plane mirror is
 - Real and erect
 - Real and inverted
 - Virtual and erect
 - Virtual and inverted
- A concave mirror gives real, inverted and same size image if the object is placed
 - At F
 - At infinity
 - At C
 - Beyond C
- The radius of curvature of a mirror is 20 cm the focal length is
 - 20 cm
 - 10 cm
 - 40 cm
 - 5 cm
- The angle of reflection is equal to the angle of incidence:
 - always
 - sometimes
 - under special conditions
 - never
- The angle between an incident ray and the plane mirror is 30°. The total angle between the incident ray and reflected ray will be:
 - 30°
 - 60°
 - 90°
 - 120°
- A ray of light is incident on a plane mirror making an angle of 90° with the mirror surface. The angle of reflection for this ray of light will be:
 - 45°
 - 90°
 - 0°
 - 60°

8. The image of an object formed by a plane mirror is:
(A) virtual (B) real (C) diminished (D) upside-down
9. The image formed by a plane mirror is:
(A) virtual, behind the mirror and enlarged.
(B) virtual, behind the mirror and of the same size as the object.
(C) real, at the surface of the mirror and enlarged.
(D) real, behind the mirror and of the same size as the object.
10. The mirror formula is
(A) $\frac{1}{v} - \frac{1}{u} = \frac{1}{f}$ (B) $\frac{1}{v} \times \frac{1}{u} = \frac{1}{f}$ (C) $\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$ (D) $\frac{1}{v} \neq \frac{1}{u} \neq \frac{1}{f}$
11. In a convex spherical mirror, reflection of light takes place at:
(A) a flat surface (B) a bent-in surface
(C) a bulging-out surface (D) an uneven surface
12. A diverging mirror is:
(A) a plane mirror (B) a convex mirror
(C) a concave mirror (D) a shaving mirror
13. If R is the radius of curvature of a spherical mirror and f is its focal length, then:
(A) $R = f$ (B) $R = 2f$ (C) $R = f/2$ (D) $R = 3f$
14. The focal length of a spherical mirror of radius of curvature 30 cm is:
(A) 10 cm (B) 15 cm (C) 20 cm (D) 30 cm

31. Name the two types of spherical mirrors. What type of mirror is represented by the:
- (A) back side of a shining steel spoon?
- (B) front side of a shining steel spoon?
32. What is the relation between the focal length and radius of curvature of a spherical mirror (concave mirror or convex mirror)? Calculate the focal length of a spherical mirror whose radius of curvature is 25 cm.
33. Explain with a suitable diagram, how a concave mirror converges a parallel beam of light rays. Mark clearly the pole, focus and centre of curvature of concave mirror in this diagram.
34. Describe with a suitable diagram, how a convex mirror diverges a parallel beam of light rays. Mark clearly the pole, focus and centre of curvature of convex mirror in this diagram.
35. Compare how an ammeter and a voltmeter are connected in circuit.
36. What do the following symbols mean in circuit diagrams?



37. If 20 C of charge pass a point in a circuit in 1 s, what current is flowing?
38. A current of 4A flows around a circuit for 10 s. How much charge flows past a point in the circuit in this time?
39. What is the current in a circuit if the charge passing each point is 20 C in 40 s?
40. Fill in the following blanks with suitable words:
- (A) A current is a flow of For this to happen there must be a circuit.
- (B) Current is measured in using an placed in In a circuit.

LONG ANSWER QUESTIONS

[2×5=10]

41. Write any five features of a plane mirror.
42. With a neat labelled diagram of concave and a convex mirror explain the differences between them?



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