Ray Optics

Saitechinfo NEET-JEE Academy
Ray Optics | Physics
20 MCQs:

1. What is the phenomenon where light bounces back into the same medium after striking a surface?
    - A) Refraction
    - B) Reflection
    - C) Diffraction
    - D) Dispersion
2. Which of the following is an optical medium through which light can pass very easily?
    - A) Opaque Medium
    - B) Transparent Medium
    - C) Translucent Medium
    - D) None of the above
3. A medium that allows light to pass through partially but not clearly is known as:
    - A) Opaque Medium
    - B) Transparent Medium
    - C) Translucent Medium
    - D) Reflective Medium
4. The angle between the incident ray and the reflected ray is known as:
    - A) Angle of Incidence
    - B) Angle of Reflection
    - C) Angle of Deviation
    - D) Angle of Refraction
5. In a plane mirror, the image formed is:
    - A) Real and inverted
    - B) Virtual and erect
    - C) Real and erect
    - D) Virtual and inverted
6. What is the minimum size of a plane mirror required for a person to see their full image?
    - A) Equal to their height
    - B) Half their height
    - C) Twice their height
    - D) One-third of their height
7. The center of the reflecting surface of a spherical mirror is called:
    - A) Pole
    - B) Principal Focus
    - C) Radius of Curvature
    - D) Center of Curvature
8. The line joining the center of curvature and the pole of a mirror is known as:

- A) Principal Axis
- B) Focal Length
- C) Diameter
- D) Radius

9. The distance between the pole and the principal focus is called:
   - A) Radius of Curvature
   - B) Focal Length
   - C) Principal Distance
   - D) None of the above
10. Which mirror always forms a virtual and diminished image?
    - A) Plane Mirror
    - B) Concave Mirror
    - C) Convex Mirror
    - D) Paraboloidal Mirror
11. A mirror formula is represented by which equation?
    - A) $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$
    - B) $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$
    - C) $f = u + v$
    - D) None of the above
12. The inability of a spherical mirror to focus all rays parallel to the principal axis to a single point is called:
    - A) Chromatic Aberration
    - B) Spherical Aberration
    - C) Paraxial Aberration
    - D) None of the above
13. The relation between focal length (f) and the radius of curvature (r) of a spherical mirror is:
    - A) $r = 2f$
    - B) $f = 2r$
    - C) $r = f/2$
    - D) $f = r/2$
14. Which of the following statements is true about a concave mirror when the object is placed between the focal point and the pole?
    - A) The image is real and inverted
    - B) The image is virtual and erect
    - C) The image is of the same size as the object
    - D) The image is at infinity
15. When parallel rays of light pass through a convex mirror, they appear to diverge from:
    - A) Focal Point
    - B) Principal Axis
    - C) Center of Curvature
    - D) None of the above
16. If two plane mirrors are inclined at an angle of 90°, the number of images formed will be:
    - A) 1
    - B) 2
    - C) 3
    - D) 4
17. Which of the following is not true for a plane mirror?
    - A) The image is laterally inverted
    - B) The image is virtual

    - C) The image is at twice the distance of the object from the mirror
    - D) The image is of the same size as the object
18. If the incident angle is 30°, what is the angle of reflection for a plane mirror?
    - A) 15°
    - B) 30°
    - C) 45°
    - D) 60°
19. In the context of spherical mirrors, the distance between the pole and the object is referred to as:
    - A) Object Distance
    - B) Image Distance
    - C) Focal Length
    - D) Principal Distance
20. What happens when light strikes a convex mirror parallel to its principal axis?
    - A) It reflects back along the same path
    - B) It converges at a point
    - C) It diverges after reflection
    - D) It gets absorbed by the mirror

Key:

1. B
2. B
3. C
4. C
5. B
6. B
7. A
8. A
9. B
10. C
11. A
12. B
13. A
14. B
15. A
16. D
17. C
18. B
19. A
20. C