

## Chapter 8

# Light in Physics

**MCQ 1:** Our eyes detect light in

- A. RGB form, Red Blue Green form
- B. ROYGBIV, rainbow color form
- C. The simple form of a particular color
- D. none of these ways

**MCQ 2:** The symbol to represent the speed of light in vacuum or air is

- A.  $v$
- B.  $c$
- C.  $a$
- D.  $l$

**MCQ 3:** The mid-point between the lens surface and the principle axis is termed as

- A. midway center
- B. focal center
- C. focal point
- D. optical center

**MCQ 4:** Light can travel in

- A. air only
- B. vacuum only
- C. both air and vacuum
- D. none of the mediums

**MCQ 5:** The point at which all rays converge is termed as

- A. converging point
- B. focal point
- C. focal center
- D. converging center

**MCQ 6:** In symbols, the formula to calculate the refractive index is

- A.  $n = c/v$
- B.  $r_n = 1/m$
- C.  $i = v/l$
- D.  $n = v/m$

**MCQ 7:** The distance of virtual image and the object is equal from the mirror' is it right or wrong?

- A. Right
- B. Wrong
- C. May be right or may be wrong
- D. Neither right nor wrong

**MCQ 8:** Which one of the following is a form of energy?

- A. Force
- B. Acceleration
- C. Light
- D. Speed

**MCQ 9:** The image that is created in the plane mirror is virtual' is a true statement of plane mirror image.

- A. Right
- B. Wrong
- C. May be right or may be wrong
- D. Neither right nor wrong

**MCQ 10:** The incident ray, reflected ray and normal lie at different points is a

- A. true law of reflection
- B. false law of reflection
- C. neutral law of reflection
- D. it

**MCQ 11:** Virtual image is of same size as the object' is a true statement of plane mirror image.

- A. Right
- B. Wrong
- C. May be right or may be wrong
- D. Neither right nor wrong

**MCQ 12:** The virtual image undergoes a little inversion' is a false statement of plane mirror image.

- A. Right
- B. Wrong
- C. May be right or may be wrong
- D. Neither right nor wrong

**MCQ 13:** The incident ray, reflected ray and the normal lie at the same point' is a true statement of refraction.

- A. Right
- B. Wrong
- C. May be right or may be wrong
- D. Neither right nor wrong

**MCQ 14:** The two types of lenses are

- A. small and large
- B. converging and diverging

- C. transpiring and respiring
- D. living and non-living

**MCQ 15:** The objects that produce their own light are called

- A. Luminous objects
- B. Non-luminous objects
- C. Transparent objects
- D. Opaque objects

**MCQ 16:** The symbol for refractive index is equal to

- A.  $i$
- B.  $r$
- C.  $n$
- D.  $r_n$

**MCQ 17:** The angle of incidence is equal to the angle of reflection is a

- A. true law of reflection
- B. false law of reflection
- C. neutral law of reflection
- D. it

**MCQ 18:** A horizontal line which passes through the optical center of the lens is termed as

- A. middle axis
- B. horizontal axis
- C. principal axis
- D. imaginary diameter

**MCQ 19:** The distance between the optical center and the focal point is termed as

- A. converging length
- B. focal length
- C. meeting length
- D. crossing length

**MCQ 20:** Moon is a good example of

- A. Luminous objects
- B. Non-luminous objects
- C. Transparent objects
- D. Opaque objects

**MCQ 21:** The bend of light rays or image in denser medium is termed as

- A. Reflection
- B. Opacation
- C. Refraction
- D. Transpiration

**MCQ 22:** In which lens are the light rays brought to the focal point?

- A. Converging lens
- B. Diverging lens
- C. Both lenses
- D. None of the lenses

**MCQ 23:** If we observe a pebble in a pool, the pebble would appear to be

- A. deeper in the water than it really is
- B. of same depth in the water as it has
- C. nearer to the surface than it really is
- D. invisible

**MCQ 24:** Total internal reflection occurs when

- A. light passes from a denser to a lighter medium
- B. light comes into air from vacuum
- C. light goes to vacuum from air
- D. light passes from more denser to less denser medium

**MCQ 25:** Which one of the ratios are equal to constant (in refraction)

- A.  $\sin r/\sin i$
- B.  $\sin r (\sin i)$
- C.  $\sin i/\sin r$
- D.  $\sin i^2/\sin r$

**MCQ 26:** The straight line in which the light travels is called

- A. wave
- B. ray
- C. path
- D. light perimeter

**MCQ 27:** The objects that don't produce their own light are called

- A. Luminous objects
- B. Non-luminous objects
- C. Transparent objects
- D. Opaque objects

**MCQ 28:** Which one of the following gives the characteristics of a plane mirror?

- A. upright, virtual, inverted, diminished
- B. same size, upright, inverted, virtual
- C. inverted, same size, real, upright
- D. inverted, magnified, virtual, upright

**MCQ 29:** The symbol to represent the speed of light in the medium is

- A. l
- B. m
- C. c
- D. v

**MCQ 30:** The difference in the speed of light in air and in denser medium is termed as

- A. reflective index
- B. refractive index
- C. transactional index
- D. density index

**MCQ 31:** Which one of the following surface don't reflect light?

- A. Transparent
- B. Opaque
- C. Luminous
- D. All surfaces reflect light

**MCQ 32:** The medium in which the light rays get slower in speed, this medium is termed as

- A. Rarly denser
- B. Lightingly denser
- C. Optically denser
- D. Refractively denser

**MCQ 33:** A piece of glass with curved surface is termed as

- A. biconcave mirror
- B. blind mirror
- C. lens

D. mirror

**MCQ 34:** The image formed by a projector would be

- A. inverted, real, diminished
- B. virtual, upright, diminished
- C. virtual, upright, magnified
- D. real, inverted, magnified

**MCQ 35:** In which lens are the light rays are spread out?

- A. Converging lens
- B. Diverging lens
- C. Both lenses
- D. None of the lenses

**MCQ 36:** The normal, incident ray and the reflective ray lie at a same point in

- A. reflection only
- B. refraction only
- C. reflection and refraction both
- D. none of them

**MCQ 37:** Choose the wrong, the size of the image formed in a plane mirror

- A. could be taller than the mirror
- B. the height of the image depends on the object distance
- C. the width of the image is the same as of the object
- D. the image height depends on the object height

**MCQ 38:** Light travels at a speed of (in vacuum)

- A.  $3.0 \times 10^7 \text{ m s}^{-1}$
- B.  $30 \times 10^8 \text{ m s}^{-1}$
- C.  $3.0 \times 10^{-8} \text{ m s}^{-1}$

D.  $3.0 \times 10^8 \text{ m s}^{-1}$

**MCQ 39:** Sun is a good example of

A. Luminous objects

B. Non-luminous objects

C. Transparent objects

D. Opaque objects

**MCQ 40:** When the angle of incidence in denser medium is greater than the critical angle, will the total internal reflection take place or not?

A. It will

B. It won't take place

C. may take place

D. it is a property of total external angle

**MCQ 41:** The angle of incidence in the optically denser medium for which the angle of refraction in the less dense medium is  $90^\circ$  is termed as

A. normal angle

B. covalent angle

C. critical angle

D. internal angle

**MCQ 42:** The virtual image is upright' is a true statement of plane mirror image.

A. Right

B. Wrong

C. May be right or may be wrong

D. Neither right nor wrong

**MCQ 43:** Light travels in

A. curved line

- B. rings
- C. straight line
- D. different speeds

**MCQ 44:** Stars are a good example of

- A. Luminous objects
- B. Non-luminous objects
- C. Transparent objects
- D. Opaque objects

**MCQ 45:** Which one of the following is a true statement about reflection?

- A. Incident ray, reflective ray and the normal lies at a different point
- B. angle of incidence is not equal to angle of reflection
- C. the point on which the ray touches the mirror is called critical point
- D. the angle of reflection is equal to the angle of incidence

Answers:

- 1. **B**
- 2. **B**
- 3. **D**
- 4. **C**
- 5. **B**
- 6. **A**
- 7.
- 8. **C**
- 9. **A**
- 10. **B**
- 11. **A**
- 12. **B**
- 13. **A**
- 14. **B**
- 15. **A**

16. **C**
17. **A**
18. **C**
19. **B**
20. **B**
21. **C**
22. **A**
23. **C**
24. **D**
25. **C**
26. **B**
27. **B**
28. **B**
29. **D**
30. **B**
31. **D**
32. **C**
33. **C**
34. **D**
35. **B**
36. **C**
37. **A**
38. **D**
39. **A**
40. **A**
41. **C**
42. **A**
43. **C**
44. **A**
45. **D**