

LIGHT-REFLECTION AND REFRACTION

Question 1: The bending of a beam of light when it passes obliquely from one medium to another is known as _____.

1. reflection
2. refraction
3. dispersion
4. deviation

Answer: 2

Question 2: The part of the lens through which the ray of light passes without suffering deviation is called _____.

1. optical centre
2. focus
3. centre of curvature
4. pole

Answer: 1

Question 3: Convex lens always gives a real image if the object is situated beyond _____.

1. optical centre
2. centre of curvature
3. focus
4. radius of curvature

Answer: 3

Question 4: Parallel rays of light entering a convex lens always converge at _____.

1. centre of curvature
2. the principal focus
3. optical centre
4. the focal plane

Answer: 2

Question 5: Where should an object be placed so that a real and inverted image of the same size is obtained, using a convex lens?

1. Between O and F
2. At F
3. At 2 F
4. At infinity

Answer: 3

Question 6: SI unit of the power of a lens is _____.

1. dioptre
2. cm
3. metre
4. watt

Answer: 1

Question 7: 1 D is the power of the lens of focal length of _____ cm.

1. 100
2. 10
3. 1/100
4. 1/10

Answer: 1

Question 8: In a simple microscope lens used is _____.

1. biconvex
2. biconcave
3. plano convex
4. cylindrical

Answer: 1

Question 9: Reciprocal of focal length in metres is known as the _____ of a lens.

1. focus
2. power
3. power of accommodation
4. far point

Answer: 2

Question 10: A convex lens is called _____.

1. converging lens
2. diverging lens
3. both converging and diverging lens
4. refracting lens

Answer: 1

Question 11: A positive magnification greater than unity indicates _____.

1. real image
2. virtual image
3. neither real nor virtual image
4. distorted image

Answer: 2

Question 12: The power of a convex lens of focal length 50 cm is _____.

1. + 2D
2. - 2D
3. 50 D
4. - 5D

Answer: 1

Question 13: The focal length of a lens whose power is -1.5 D is _____.

1. -66.66 cm
2. + 1.5 m
3. + 66.66 cm
4. -1.5 m

Answer: 1

Question 14: Real images formed by single convex lenses are always _____.

1. on the same side of the lens as the object
2. inverted
3. erect
4. smaller than the object

Answer: 2

Question 15: An object is placed 12 cm from a convex lens whose focal length is 10 cm. The image must be.

1. virtual and enlarged
2. virtual and reduced in size
3. real and reduced in size
4. real and enlarged

Answer: 4

Question 16: When a person uses a convex lens as a simple magnifying glass, the object must be placed at a distance.

1. less than one focal length
2. more than one focal length
3. less than twice the focal length
4. more than twice the focal length

Answer: 1

Question 17: The image produced by a concave lens is _____.

1. always virtual and enlarged
2. always virtual and reduced in size
3. always real
4. sometimes real, sometimes virtual

Answer: 2

Question 18: A virtual image is formed by _____.

1. a slide projector in a cinema hall
2. the ordinary camera
3. a simple microscope
4. telescope

Answer: 3

Question 19: An object is placed 25 cm from a convex lens whose focal length is 10 cm. The image distance is _____ cm.

1. 50 cm
2. 16.66 cm
3. 6.66 cm
4. 10 cm

Answer: 2

Question 20: The least distance of distinct vision is _____.

1. 25 cm
2. 25 m
3. 0.25 cm
4. 2.5 m

Answer: 1

Question 21: A convex lens has a focal length of 20 cm. Its power in dioptries is _____.

1. 2
2. 5
3. 0.5
4. 0.2

Answer: 2

Question 22: An object is placed before a concave lens. The image formed _____.

1. is always erect
2. may be erect or inverted
3. is always inverted
4. is always real

Answer: 1

Question 23: A ray of light travels from a medium of refractive index n_1 to a medium of refractive index n_2 . If angle of incidence is i and the angle of refraction is r .

Then $\frac{\sin i}{\sin r}$ is equal to

1. n_1
2. n_2
3. n_{21}
4. n_{12}

Answer: 3

Question 24: Two thin lenses of power +5 D and -2 D are placed in contact with each other. Focal length of the combination is

1. +3 m
2. -3 m
3. 0.33 m
4. -0.33 m

Answer: 3

Question 25: The lens formula in cartesian frame is _____.

1. $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$
2. $\frac{1}{f} = \frac{1}{u} - \frac{1}{v}$
3. $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$
4. $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$

Answer: 3