

Physics ECAT Pre Engineering Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	The image of an object 5 mm length is only 1 cm high. The magnification produced by lens is:	A. 1 B. 0.2 C. 2 D. 0.1
2	For the virtual image, option _____ is not correct:	A. $1/p = 1/f - 1/q$ B. $1/f = 1/p - 1/q$ C. $1/p = 1/p - 1/f$ D. $1/p = 1/f + 1/q$
3	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Smaller B. Larger C. Zero D. None of these
4	The size of the image is maximum when its distance from the magnifying glass is:	A. 0.10 m B. 0.15 m C. 0.20 m D. 0.25 m
5	When a source of light is at very large distance, the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
6	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these
7	Laws of reflection and refraction can also be explained by:	A. Particle nature of light B. Quantum nature of light C. Wave nature of light D. Complex nature of light
8	The speed of the secondary wavelets as mentioned in Huygen's principle is _____ the speed of propagation of the wave itself.	A. Equal to B. Greater than C. Smaller than D. None of these
9	Light appears to travel in straight line because	A. It is not absorbed by the atmosphere B. It is refracted by the atmosphere C. Its wavelength is very small D. Its velocity is very large
10	The ratio of the size of the image to that of object is called:	A. Focal length B. Aperture C. Linear magnification D. Principal axis
11	Resolving power in mth order diffraction for grating is given by:	A. $R = N/m$ B. $R = m/N$ C. $R = N \times m$ D. None of these
12	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
13	Least distance of distinct vision of an old man possibly becomes:	A. A little less than 25 cm B. A little more than 25 cm C. Much less than 25 cm D. None of these
14	In case of constructive interference of two waves, the amplitude of the resultant wave is _____ either of the waves:	A. Greater than B. Equal to C. Smaller than D. None of these
15	When the same object is viewed at a shorter distance, the image on the retina of the eye is _____ the so the object appears:	A. Greater, smaller B. Smaller, smaller C. Smaller, larger D. Larger, larger

D. Greater, larger

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If the object is placed at 12 cm distance from a convex lens of focal length 6 cm, then we get an image of ____ as that of object:

- A. Double the size
- B. Same size
- C. Half the size
- D. None of these

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A magnifier gives an image which is:

- A. Virtual, inverted
- B. Real, erect
- C. Virtual, erect
- D. Real, inverted

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A line which represents the direction of travel of a wave is known as:

- A. Spherical Wavefront
- B. Locus
- C. Ray
- D. Either B or C

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How is the image formed by a convex lens affected if the upper half of the lens is covered with a paper:

- A. The upper half of the image is cut off
- B. The brightness of the image is reduced
- C. The brightness of the image is increased
- D. No effect at all

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The magnifier forms a virtual image of the object at:

- A. None of these
- B. Both A and B are correct
- C. Much farther than the least distance
- D. Least distance of distinct vision