Exercise MCQs

Sr. No.	Questions	A	B	C	D
1	Which of the following quantity is not changed during refraction of light?	its direction	its speed	✓its frequency	its wavelength
2	A converging mirror with a radius of 20 cm creates a real image 30 cm from the mirror. What is the object distance?	-5.0 cm	-7.5 cm	✓15 cm	-20 cm
3	An object is placed at the centre of curvature of a concave mirror. The image produced by the mirror is located	out beyond the centre of curvature.	✓at the centre of curvature.	between the centre of curvature and the focal point	at the focal point
4	An object is 14 cm in front of a convex mirror. The image is 5.8 cm behind the mirror. What is the focal length of the mirror?	-4.1 cm	-8.2 cm	✓-9.9 cm	-20 cm
5	The index of refraction depends on	the focal length	✓the speed of light	the image distance	the object distance
6	Which type of image is formed by a convax lens on a screen?	✓inverted and real	inverted and virtual	upright and real	upright and virtual
7	Which type of image is produced by the converging lens of human eye if it views a distant object?	real, erect, same size	✓real, inverted, diminished	virtual, erect, diminished	virtual, inverted, magnified
8	Image formed by a camera is	✓real, inverted, and diminished	virtual, upright and diminished	virtual, upright and magnified	real, inverted and magnified
9	If a ray of light in glass is incident on an air surface at an angle greater than the critical angle, the ray will	refract only	✓reflect only	partially refract and partially reflect	diffract only
10	The critical angle for a beam of light passing from water into air is 48.8 degrees. This means that all light rays with an angle of incidence greater than this angle will be	Absorbed	✓totally reflected	partially reflected and partially transmitted	totally transmitted

Additional MCQs

Sr. No.	Questions	A	B	C	D
1	Wave theory of light is formulated by	Newton	Faraday	Bell	✓Maxwell
2	Focal length of spherical mirror is equal to	✓$\frac{R}{2}$	$\frac{R}{4}$	2R	4R
3	Refractive index of diamond is	1.00	1.33	1.31	✓2.42
4	Refractive index of air is	✓1.00	1.33	1.31	2.42
5	Refractive index of ice is	1.00	1.33	✓1.31	2.42
6	Refractive index of water is	1.00	✓1.33	1.31	2.42
7	Refractive index of ethyl alcohol is	1.00	1.33	1.31	✓1.36
8	Refractive index of cubic zircon is	1.00	1.33	✓2.21	2.42
9	Refractive index of glass (flint) is	✓1.66	1.52	1.31	2.42
10	Refractive index of glass (crown) is	1.66	✓1.52	1.31	2.42
11	Refractive index depends on	Object distance	Image distance	Focal length	✓Speed of light
13	Critical angle of glass is	0°	45°	90°	✓42°
14	Critical angle of water is	48.2°	48.4°	48.6°	✓48.8°
15	Optical fiber work on the principal of	Refraction	Reflection	Diffraction	✓Total internal reflection
16	Endoscope which is used to diagnose bladder is called	Gastroscope	✓Cystoscope	Bronchoscope	Microscope
17	At night we can see stars in the sky without telescope	300	✓3000	30000	300000
18	The magnification of a combination of lenses is equal to the _____ of the magnifications of each lens.	Addition	Subtraction	✓Product	None of these
19	Number of lenses used in slide projector is	1	2	✓3	0
20	The power of lens is reciprocal of	Focal point	✓Focal length	Dioptre	Principal focus
21	The change in focal length of the eye lens is called	Modification	Induction	✓Accommodation	Distinct vision
22	The speed of light in water is approximately	$3.0 \times 10^8\ ms^{-1}$	$2.0 \times 10^8\ ms^{-1}$	✓$2.3 \times 10^8\ ms^{-1}$	$2.6 \times 10^8\ ms^{-1}$
23	The speed of light in air is approximately	✓$3.0 \times 10^8\ ms^{-1}$	$2.0 \times 10^8\ ms^{-1}$	$2.3 \times 10^8\ ms^{-1}$	$2.6 \times 10^8\ ms^{-1}$
24	The speed of light in glass is approximately	$3.0 \times 10^8\ ms^{-1}$	✓$2.0 \times 10^8\ ms^{-1}$	$2.3 \times 10^8\ ms^{-1}$	$2.6 \times 10^8\ ms^{-1}$
25	Human eye has	Concave lens	✓Convex lens	Concave mirror	Convex mirror
26	A converging mirror with a radius of 20 cm. its focal length will be	✓10 cm	−10 cm	20 cm	−20 cm
27	Which type of mirror used in head lights	Concave mirror	Convex mirror	✓Parabolic mirror	Both (A) and (B)
28	Snell's law stated as	✓$\frac{\sin i}{\sin r} = n = \frac{n_2}{n_1}$	$\frac{\sin i}{\sin r} = n = \frac{n_1}{n_2}$	$\frac{\sin r}{\sin i} = n = \frac{n_2}{n_1}$	$\frac{\cos i}{\cos r} = n = \frac{n_2}{n_1}$