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#### MULTIPLE CHOICE QUESTIONS (MCQs)

$\cdot$ $(1)$	A transparent re	etracting medium boui	nded by two spherica	l surface is called:	
	* Mirror	* Lens	* Gass ,	* Grating	
(2)	A Lens which is	thin at the middle a	nd thick at the edge:	s, is called:	
	* Concave lens	* Convex lens	* Plano-convex	* None of these	
(3) A lens which is thick in the middle and thin at the edges, is calleds:					
	* Double concav	ve lens	* Plano-concave	lens	
	* concave lens		* convex lens		
(4)	A lens which co	nverges a parallel be	am of light to a poin	it is called:	
	* Diverging lens	* Converging len	s * Plano-convex	lens * Plano-concave lens	
(5)	A lens which di	verges a parallel bear	n of light is called:		
	* Diverging lens	* Converging len	s * Plano-convex l	lens * Plano-concave lens	
(6)	A point at which or diverge after i	the ray incident para efraction through the l	llel to the principle a lens, is known as its:	ixis of a lens appear to conve	rge
	* Pole	* Aperture	* Focal length	* Focus	
<b>(7)</b>	The diameter of	the boundary of a le	ns, is called:		
	* Pole	* Aperture	* Focal length	* Principle axis	
(8)	The maximum d	istance between an obj	ect and its real image	in a convex lens is:	
	* f	* 2 f	* 3 {	* 4 f	
(9)	A converging len	s produces an inverted	l magnified image. T	he object must be:	1
	* Between the le	ns and the focus	* At the focus		1
	* At infinity	.//		cus and centre of curvature	
(10)	The distance bet	tween the principal fo		centre is called:	
	* Aperture		ture* Principal axis	* Focal length	
(11)	A 2mm object is its image will be	placed 20 cm from a	converging lens of	10cm focal length. The size	of
	* 1 mm	5* 2mm	* 3 mm	* 4 mm	
(12)		aced at 2F of convex	lens, the image will	be formed:	
	*4F	* 3 F	* <b>F</b>	* 2 F	, <sup>1</sup> 4 p
(13)		he glass is 2.5 dioptre	s, the corresponding	g focal length is:	-
	* 25 cm	* 60 cm	* 50 cm	* 40 cm	
(14)		oncave lens of focal le	ength 50 cm is:		- 54
	* 0.5 dioptre	*-2 dioptres	* 2 dioptres	* -0.5 dioptre	
(15)	The power of a c	onvex lens of focal len	ngth 25 cm is:		
	* 0.04 dioptre	* 0.4 dioptre	* 4 dioptre	* $\frac{1}{4}$ dioptre	
(16)		lens is 2 dioptres, its	focal length is:		
	* 25 cm	* 50 cm	* 75 cm	* 20 cm	
17)	The unit of power				
	* Watt	* Joule	* Dioptre	* Newton	;

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(18)	A student is wear	ing the glass of po	wer 2.5 dioptres corres	ponds to the focal length of:			
	* 25 cm	* 60 cm	* 50 cm	* 40 cm			
(19)	The power of a convex lens of focal length 5 cm is:						
	* 1 Dioptre	* 5 Dioptre	* 20 Dioptre	* 0.2 Dioptre			
(20)	Chromatic aberr	ration is caused b	<b>y:</b>				
	* Reflection	* Dispersion	* Refraction	* Interference			
(21)	The defect of lens which can be easily corrected by reducing aperture is known as:						
	* Spherical aberra	ation	* Astigmation				
	* Chromatic	•	* Chromatic ab	perration			
(22)	Chromatic aberration can be removed by using:						
•	* Convex lens		* Concave lens				
	* Concave mirror		* Combination	of a concave and convex lens			
(23)	If a lens has more	than one focal len	gth for different colour	s this defect is called:			
•	* Spherical aberr	ation	* Chromatic ab	perration			
	* Myopia		* None of these	<b>(</b> )			
(24)	If an object is pla	ced at the focus of	a convex lens, its imag	e will be formed at:			
	* F	* 2F	* Between F ar	nd 2F * Infinity			
(25)	The magnifying	power of a magn	ifying glass is:				
	* fo/fe	* fe/fo	*1 + d/f	*1 + f/d			
(26)	Two convex lenses of the same focal length 'f' are kept touching each other. The focal						
		bination will be:					
(0.5)	* f	* f/2	* 2f	* 2f + 2			
(27)	focal length in:	es, each of focal le	ength 10 cm are in clo	se combination. Their combined			
	* 20 cm	* 0.2 cm	* 5 cm	* 10 cm			
(28)	The least distance	(-	n for a normal eye:				
· .	* 15 cm	* 30 cm	* 25 cm	* 50 cm			
(29)	If a single convex lens is placed close to an eye, it is being used as a:						
	* Compound mic	roscope	* Spectrometer				
	* Telescope		* Simple micro	scope			
(30)	If the focal lengt	h of a magnifying	glass is 5 cm, its mag	nification is:			
	* 2	* 6	* 5	* 20			
(31)	If the focal length	of a magnifying g	lass is 25cm, its magnif	ication for a normal person is:			
	* 2	* 4	* 5	* 20			
(32)	An astronomical length equal to:	telescope when foc	cused for infinity with	$f_0 = 60$ cm and $f_0 = 3$ cm has its			
	* 180 cm	* 2 cm	* 63 cm	* 57 cm			
(33)	If an astronomical telescope has an objective of focal length 90cm and the focal length of its eye - piece is 10 cm, the length of the telescopes is:						
	* 9 cm	* 80 cm	* 100 cm	* Non of these			

XI-Physics Chapter# 10, Page# 37 The length of astronomical telescope focused so that the final image is located at (34)infinity is: \* fo - fe \* fo  $\times$  fe \* fo /fe \* fo + fe (35)A converging lens behaves like a diverging lens when object is placed: \* Between F and 2F \* Beyond 2F \* Between the focus and optical centre The length of a Galilean telescope is given by: (36)\* fo  $\times$  fe \* fo + fe The final image produced by a compound microscope in: (37)\* Virtual and erect \* Real and inverted \* Real and erect \* Virtual and inverted (38) The final image produced by an astronomical telescope is: \* Real and erect \* Virtual and erect \* Real and inverted \* Virtual and inverted (39)The final image produced by Galilean telescope: \* Real and erect \* Virtual and erect \* Real and inverted Virtual and inverted Which one of the following does not give an erect image: (40)\* Galilean telescope \* Terrestrial telescope \* Prism binoculars \* Astronomical telescope (41) Which one of the following gives an erect image: \* Compound microscope \* Astronomical telescope \* Galilean telescope \* Concave lens (42)In Galileo's telescope, eye piece is a: \* Concave lens \* Convex lens \* Converging lens \* plano concave lens A Galilean telescope with objective of focal length 30cm and eye piece of focal length (43)8cm when focused for infinity has length equal to: \* 38cm \* 22cm \* 7.5cm \* 240cm Which one of the following telescopes has the least length when set for parallel rays: (44)\* Astronomical telescope \* Galileo's telescope \* Terrestrial telescope \* Reflecting telescope In a terrestrial telescope an extra lens is used to: (45)\* Increase its magnifying power \* To gather more light \* To remove chromatic aberration \* To see an erect image A spectrometer is used study: (46)\* Spectrum \* Telescope \* Refractive index \* None of these

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# ANSWER KEY

(1) Lens	(2) Concave lens	(3) Convex lens
(4) Converging lens	(5) Diverging lens	(6) Focus
(7) Aperture	(8) 4f	(9) Between the focus and centre of curvature
(10) Focal Length	(11) 2mm	(12) 2F
(13) 40cm	(14) –2 dioptres	(15) 4 dioptre
(16) 50cm	(17) Dioptre	(13) 40cm
(19) 20 Dioptre	(20) Dispersion	(21) Spherical aberration
(22) Combination of concave and convex lens	(23) Spherical aberration	(24) Infinity
(25) 1 + d/f	(26) f/2	(27) 5cm
(28) 25cm	(29) Simple microscope	(30) 6
(31) 2	(32) 63cm	(33) 100cm
(34) fo + fe	(35) Between the focus and optical centre	(36) fo – fe
(37) Virtual and inverted	(38) Virtual and inverted	(39) Virtual and erect
(40) Astronomical telescope	(41) Galilean telescope	(42) Concave lens
(43) 22cm	(44) Galileo's telescope	(45) To see an erect image
(46) Spectrum		