	Physics SA 2
1.	Why does sky look blue on a clear day?
2.	What is the minimum number of rays required for locating the image formed by a concave mirror for an object. Draw a ray diagram to show the formation of a virtual image by a concave mirror.
3.	What is hypermetropia? State the two causes of hypermetropia. With the help of ray diagrams, show: (i) The eye –defect hypermetropia (ii) Correction of hypermetropia by using a lens
4.	What kind of mirrors are used in big shopping stores to watch activities of customers?
5.	Draw a ray diagram to determine the position of image formed of an object place between the pole and the focus of a concave mirror?
6.	The refractive index of water is 1.33 and the speed of light in air is 3×10^8 m/s. Calculate the speed of light in water?
7.	What is Presbyopia? State the cause of Presbyopia. How is Presbyopia of a person corrected?
8.	What is meant by power of accommodation of the eye of a person.?
9.	For which position of the object does a convex lens form a virtual and erect image? Explain with the help of a ray diagram.
10.	What is myopia? State the two causes of myopia. With the help of labelled ray diagram show (i) The eye defect myopia. (ii) Correction of myopia using a lens.
11.	Why is the normal eye unable to focus on an object placed within 10 cm from the eye/
12.	What is dispersion of white light? What is the cause of such dispersion? Draw a diagram to show the dispersion of white light by a glass prism.
13.	A glass prism is able to produce a spectrum when white light passes through it but a glass slab does not produce any spectrum. Explain why is it so.
14.	A student finds the writing on the blackboard as blurred and unclear when sitting on the last desk in the classroom. He however, sees it clearly when sitting on the front desk at an approximate distance of 2m from the blackboard. Draw ray diagrams to illustrate the formation of image of the blackboard writing by his eye-lens when he is seated at the (i) last desk (ii) front desk. Name the kind of lens that would help him to see clearly even when he is seated at the last desk. Draw a ray diagram to illustrate how this lens helps him to see clearly.
15.	A concave mirror produces three times enlarged image of an object placed at 10 cm infront ot it. Calculate the radius of curvature of the mirror?
16.	A person is able to see objects clearly only when these are lying at distances between 50cm and 300cm from the eye. (a) What kind of defects of vision he is suffering from? (b) What kind of lenses will be required to increase his range of vision from 25 cm to Infinity? Explain briefly.
17.	Draw ray diagram to show the formation of a three times magnified (i) real image (ii) virtual image of an object kept in front of a converging lens. Mark the positions of object, F, 2F, O and position of image clearly in the diagram. An object of size 5 com is kept at a distance of 25cm from the optical centre of a converging lens of focal length 10cm. Calculate the distance of the image from the lens and size of the image.
18.	Give reasons for the following: (i) The sky appears to be blue during day time to a person on earth. (ii) The sky near the horizon appears to have a reddish hue at the time of sunset and sunrise.

	(iii) The sky appears dark instead of blue to an astronaut.
	(iv) The stars appears to twinkle.
	(v) Then planets do not twinkle.
19.	Explain why a ray of light passing through the centre of curvature of a concave mirror gets reflected along the same path.
20.	What is the nature of the image formed by a concave mirror in the magnification produced by the mirror is +3?
21.	At what distance should an object be place from a convex lens of focal length 18cm to obtain an image at 24cm from it on the other side. What will be the magnification produced in this case?
22.	How should a ray of light incident on a rectangular glass slab so that it comes out from the opposite side of the slab without being displaced?
23.	An object is kept at a distance of 4m in from of a spherical mirror which forms its erect image at a distance of 1.0m from the mirror. What is the magnification? Is the mirror concave or convex?
24.	A girl was playing with a beam of light from her laser torch by directing it from different directions on a convex lens held vertically. She was surprised to see that in a particular direction the beam of light continues to move along the same direction after passing through the lens. State the reason for this observation.
25.	What is meant by spectrum of white light? How can we recombine the components of white light after a prism has separated them? Draw a diagram to illustrate it?
26.	The image of an object place at 60 cm in front of a lens is obtained on a screen at a distance of 120cm from it. Find the focal length of the lens. What would be the height of the image if the object is 5 cm high?

End of previous years Question Paper
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