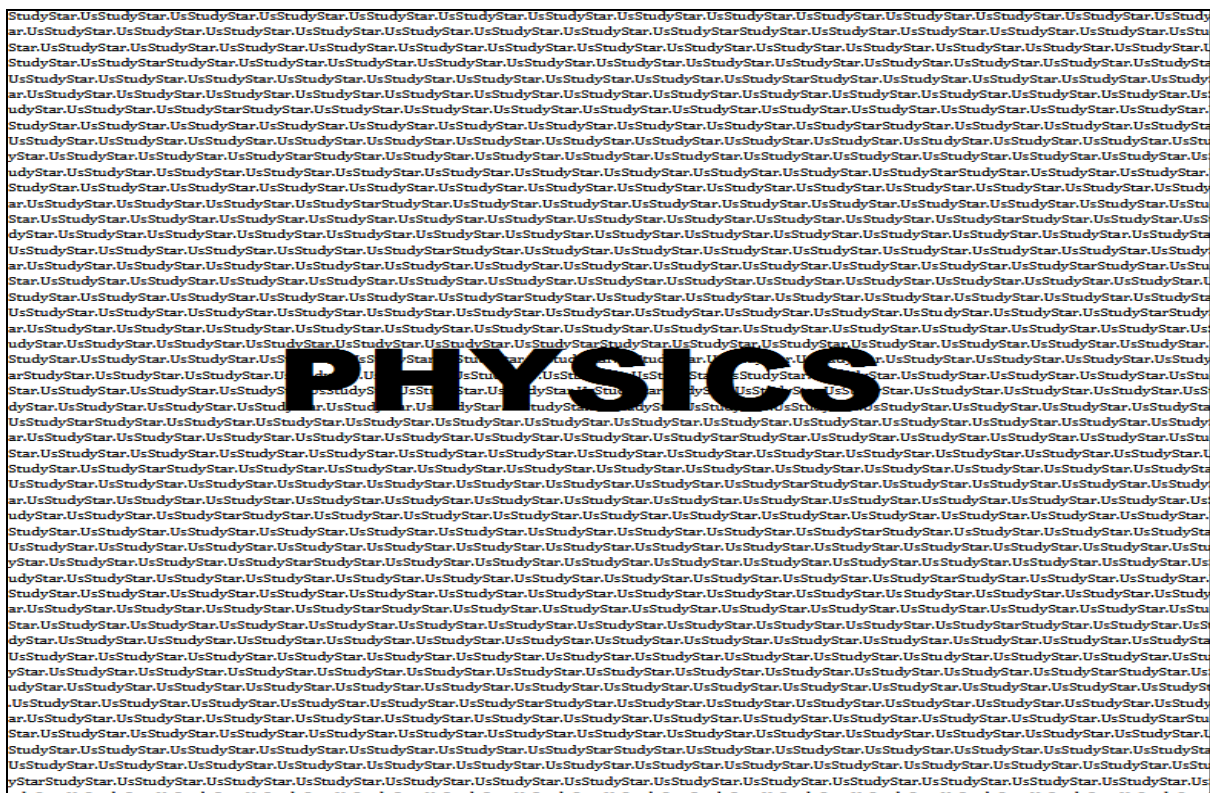




LIGHT

Total Marks: 25

Duration: 0 hours, 25 minutes

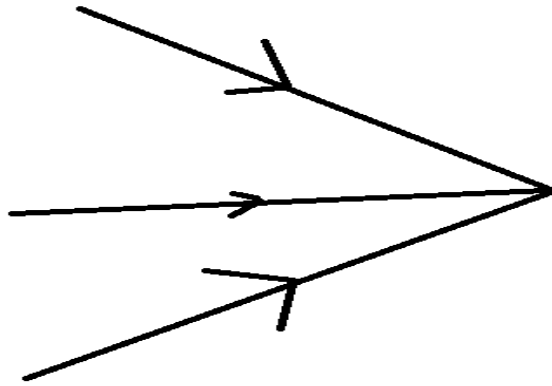
Instructions to test takers

1. Answer all the questions in this paper
2. All the answers for the questions in this paper will be found on **Study Star** (www.studystar.me)
3. Using the answers on the website, mark yourself truthfully and carefully.

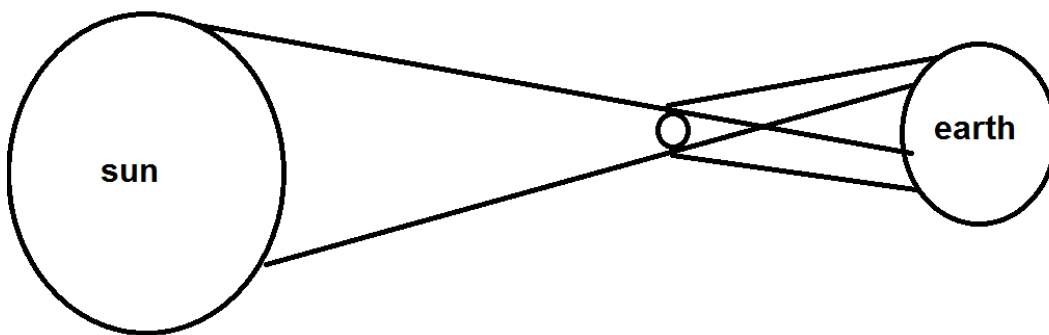
Turn this page, time yourself and begin the test

Section A [10 marks]

1. Which of the following is a luminous object?
 - a. The moon
 - b. The human body
 - c. The stars
2. Identify the diagram below.



- a. Converge beam
 - b. Divergent beam
 - c. Parallel beam
3. What type of eclipse is shown below?



- a. Annular eclipse
- b. Lunar eclipse
- c. Solar eclipse

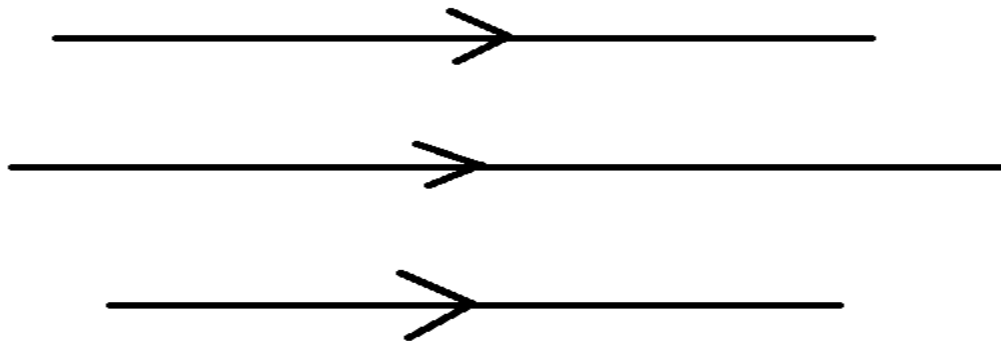
4. Which of the following is a correct characteristic of an image formed in a mirror?
 - a. The image is real
 - b. The image is the same size as the object
 - c. The image is inverted
5. State Snell's law
 - a. $\sin r / \sin i$
 - b. $\sin i / \sin r$
 - c. Light is bent as it passes from a medium to another.
6. A convex lens is a lens that is
 - a. Thick on the edges and thin in the middle
 - b. Thin at the edges and thick at the middle
 - c. Diverging lens
7. Which of the following is not a property of an image formed when an object is placed at F?
 - a. The image is inverted
 - b. The image is not formed
 - c. The rays of light are parallel to each other
8. Which of the following is an application of refractive index?
 - a. Used to check the purity of a substance
 - b. Used in refraction
 - c. Used in sunshine recorders
9. Find the angle of refraction for an object of refractive index 2.42 and angle of incidence = 83° .
 - a. 28°
 - b. 24.2°
 - c. 7°
10. As light passes from a less dense medium to a denser medium, it bends
 - a. Towards the normal
 - b. Away from the normal
 - c. As a result

Section B [5 marks]

11. Bodies which are incapable of producing their own light are called _____
12. An imaginary line drawn perpendicular to the reflecting surface at the point of reflection is called _____
13. The angle between the reflected ray and the normal is called _____
14. A particular angle of incidence that produces an angle of refraction equal to 90° is called _____
15. An optical device that can diverge or converge a ray of light is called _____

Section C [10 marks]

16. A light ray travelling through air strikes water at an angle of 40° to the surface. Given that the refractive index is 1.33, find the angle of refraction. [2]
17. Given that the refractive index of water is 1.33. Calculate the critical angle of water. [2]
18. State three applications of refractive index. [3]
19. State two characteristics of an image formed by an object placed on $2F$. [2]
20. Study the diagram below and state its name.



[1]



A top student's secret tool