JSUNIL TUTORIAL

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ASSIGNMENT

Q. 1. What is the speed of light in vacuum?

Q. 2. Which image can be obtained on the screen?

Q. 3. What sign convection has been given to the focal length of:

  a. a concave mirror
  b. a convex mirror?

Q. 4. What the significance is of +v sign of magnification?

Q. 5. If the radius of curvature of a concave mirror is 20cm, what is its focal length?

Q. 6. Define angle of refraction?

Q. 7. Define one diopter?

Q. 8. What is lens formula?

Q. 9. Write down the magnification formula for a lens in term of object distance and image distance. How does it differ from the corresponding formula for a mirror?

Q. 10. Define refractive index?

Q. 11. State two effects caused by the refraction of light?

Q. 12. Give the laws of reflection?

Q. 13. Give an example of each type of image?

Q. 14. For magnification m=+1 for a plane mirror, what does this signify for:

  a. m=1 and
  b. +ve sign for m

Q. 15. Describe the nature of the image formed when the object is placed at a distance of 20cm from a concave mirror of focal length 10cm?

Q. 16. Define reflection, incident light, reflected light, angle of incidence and angle of reflection?

Q. 17. Define the Centre of curvature, radius of curvature, pole, principle axis of a spherical mirror and focus?

Q. 18. Why does a concave mirror have a real principal focus?

Q. 19. Draw a labeled diagram showing how a plane mirror forms an image. Also write the characteristics of the image?

Q. 20. Explain lateral inversion?

Q. 21. Give the various rules for obtained images formed by a concave mirror?

Q. 22. Explain the Cartesian sign convection for a spherical mirror?

Q. 23. An object 1cm high is placed on the axis and 15cm from a concave mirror of focal length 10cm. Find the position, nature, magnification and size of the image?

Q. 24. An object 5cm is length is placed at a distance of 20cm in from of a convex mirror or radius of curvature 30cm. Find the position of the image, its nature and size?

Q. 25. An object placed 20 cm in front of a mirror is found to have an image 15cm (a) in front of it, (b) behind it. Find the focal length of the mirror and the kind of mirror in each case?

Q. 26. Show by ray diagram the formation of an image by a convex mirror?

Q. 27. What do you mean by colour mixing by subtraction?

Q. 28. What will happen to a ray of light when it falls normally on a surface?

Q. 29. What will happen to a ray of light when it travels from a denser medium to a rarer medium?

Q. 30. What is power of a lens?

Q. 31. Why do planets not twinkle?

Q. 32. What determines the colour of an object in daylight?

Q. 33. How is the image formed by a convex lens?

Q. 34. Explain total internal reflection?

Q. 35. A concave lens of focal length 15cm forms an image 10cm from lens. How far is the object be placed from the lens? Draw the ray diagram.