PHYSICS

BOOKS - SURA PHYSICS (TAMIL ENGLISH)

OPTICS

Textbook Evaluation Choose The Correct Answer

1. The refractive index of four substance A,B, C and D are 1.31, 1.43 , 1.33 , 2.4 respectively . The

speed of light is maximum in

A. A

B. B

C. C

D. D

Answer: A

 Watch Video Solution

2. Where should an object be placed so that a real and inverted image of same size is obtained by a convex lens.

A. f

B. 2f

C. infinity

D. between f and 2f

Answer: B

Watch Video Solution

3. A small bulb is placed at the principal focus of a convex lens. When the bulb is switched on, the lens will produce.

A. a convergent beam of light

B. a divergent beam of light

C. a parallel beam of light

D. a coloured beam of light

Answer: A::B::C::D

Watch Video Solution

4. Magnification of a convex lens is

A. Positive

B. negative

C. either positive or negative

D. zero

Answer: A

 Watch Video Solution

5. A convex lens forms a real, diminished point sized image on focus. Then the position of the object is at

A. focus

B. inifinite

C. at 2f

D. between f and 2f

Answer:

Watch Video Solution

6. Power of a lens is -4D, then its focal length is

A. 4 m

B. $-40m$

C. $-0.25m$

D. $-2.5m$

Answer: C

Watch Video Solution

7. In a myopic eye, the image of the object is formed

A. behind the retina

B. on the retina

C. in front of the retina

D. on the blind spot

Answer: A

Watch Video Solution

8. The eye defect 'presbyopia ' can be corrected by

A. convex lens

B. concave lens

C. convex mirror

D. Bi focal lenses

Answer: A::B::C::D

 Watch Video Solution

9. Which of the followingg lens would you prefer to use while reading small letters found inn a dictionary?

A. A convex lens of focal length 5 cm

B. A concave lens of focal length 5 cm

C. A convex lens of focal length 10 cm

D. A concave lens of focal length 10 cm

Answer: A::B::C::D

Watch Video Solution

10. If V_B, V_G, V_R be the velocity of blue , green and red light respectively in a glass prism, then which of the following statement gives, the correct relation ?

A. $V_B = V_G = V_R$

B. $V_B = V_G > V_R$

C. $V_B < V_G < V_R$

D. $V_B < V_G < V_R$

Answer: B

Watch Video Solution

Textbook Evaluation Fill In The Blanks

1. The path of the light is called as _____.

Watch Video Solution

2. The refractive index of a transparent medium is always greater than _____.

Watch Video Solution

3. If the energy of incident beam and the scattered beam are same, then the scattering of light is called as _____.

Watch Video Solution

4. According to Rayleigh's law, the amount of scattering of light is inversely proportional to the fourth power of its _____.

Watch Video Solution

5. Amount of light entering into the eye is controlled by _____.

Watch Video Solution

Textbook Evaluation True Or False If False Correct It

1. Velocity of light is greater in denser medium than in rarer medium.

Watch Video Solution

2. The power of lens depends on the focal length of the lens

Watch Video Solution

3. Increase in the converging power of eye lens cause 'hypermetropia'.

Watch Video Solution

4. The convex lens always gives small virtual image.

Watch Video Solution

Textbook Evaluation Match The Following

1. 

View Text Solution

Textbook Evaluation Assertion And Reason

1. Assertion : If the refractive index of the medium is high (denser medium) the velcoity of the light. In that medium will be small.

Reason : Refractive index of the medium is inversely proprotional to the velocity of the light.

A. both assertion and reason are true and reason is the correct explanation of assertion.

B. both assertion and reason are true but reason is not the correct explanation of assetion.

C. Assertion is true but reason is false

D. Assertion is false but reason is true.

Answer:

2. Assertion : Myopia is due to the increase in the converging power of eye lens.

Reason : Myopia can be correct with the help of concave lens.

A. Both assertion and reason are true and reason is the correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assetion.

C. Assertion is true but reason is false

D. Assertion is false but reason is true.

Answer:

Watch Video Solution

Textbook Evaluation Answer Briefly

1. What is refractive index ?

Watch Video Solution

2. State Snell's law.

Watch Video Solution

3. Draw a ray diagram to show the image formed by a convex lens when the object is placed between F and 2F.

Watch Video Solution

4. What is dispersion?

Watch Video Solution

5. What is Rayleigh's scattering?

Watch Video Solution

6. Differentiate convex lens and concave lens.

Watch Video Solution

7. What is power of accomodation of eye?

Watch Video Solution

8. What are the causes of 'Myopia' ?

Watch Video Solution

9. Why does sky appear blue?

Watch Video Solution

10. Why are traffic signals red in colourn ?

Watch Video Solution

Textbook Evaluation Give The Answer In Detail

1. List any five properties of light.

Watch Video Solution

2. Explain the rules for obtaining images formed by a convex lens with the help of ray diagram.

Watch Video Solution

3. Differentiate the eye defects : Myopia and Hypermetropia .

Watch Video Solution

4. Explain the construction and working of a 'Compound Microscope'.

Watch Video Solution

Textbook Evaluation Numerical Problems

1. An object is placed at a distance 20 cm from a convex lens of focal length 10 cm . Find the image distance and nature of the image .

Watch Video Solution

2. An object of height 3 cm is placed at 10 cm from a concave lens of focal length 15 cm. find the size of the image.

Watch Video Solution

Textbook Evaluation Higher Order Thinking Hot Questions

1. While doing an experiment for the determination of focal length of a convex lens, Raja Suddenly dropped the lens. It got broken into two halves along the axis. If he continues his experiment with the same lens, can he get the image ?

Watch Video Solution

2. While doing an experiment for the determination of focal length of a convex lens, Raja Suddenly dropped the lens. It got broken into two halves along the axis. If he continues his experiment with the same lens, Is there any change in the focal length ?

Watch Video Solution

3. The eye of the nocturnal birds like owl are having a large cornea and a large pupil. How

does it help them ?

Watch Video Solution

Government Exam Questions Answers

1. What are the advantages of telescopes ?

Watch Video Solution

Additional Questions Answer Choose The Correct Answer

1. The path of light is _____

A. ray of light

B. point

C. lines

D. beam

Answer: A

Watch Video Solution

2. The group of rays is _____.

A. lines

B. dots

C. beam

D. none of these

Answer: C

Watch Video Solution

3. Velocity and wavelength of light are related by a relation .

A. $g = c\lambda$

B. $\gamma = \frac{c}{\lambda}$

C. $c = \gamma\lambda$

D. both b & c

Answer: D

Watch Video Solution

4. Violet light has the _____ wavelength

A. lowest

B. highest

C. same

D. standard

Answer: A

Watch Video Solution

5. We can see objects because of ____.

A. reflection

B. refraction

C. transmission

D. diffraction

Answer: A

Watch Video Solution

6. _____ determines speed of light in a medium.

A. thickness

B. wavelength

C. refractive index

D. both b & c

Answer: D

Watch Video Solution

7. When light travels from rarer to denser medium, the refracted ray is _____ the normal.

A. bent away

B. along

C. bent towards

D. just grazes the surface of separation.

Answer: C

Watch Video Solution

8. For air, the refractive index is _____

A. 1

B. infinity

C. 0

D. none of these

Answer: A

Watch Video Solution

9. When a ray of light travels from one medium to another, it bends. This phenomenon is called _____.

A. reflection

B. dispersion

C. refraction

D. interference

Answer: C

Watch Video Solution

10. The splitting up of white light into colours is called _____.

A. reflection

B. refraction

C. scattering

D. dispersion

Answer: D

 Watch Video Solution

11. On a rainy day, small oily films on water show brilliant colours. This is due to _____.

A. scattering

B. disperion

C. reflection

D. interference

Answer: D

Watch Video Solution

12. Rainbow formation is due to _____ water droplets _____.

A. Ionisation

B. absorption of sunlight

C. reflection and refraction of sunlight

D. refraction of sunlight

Answer: C

Watch Video Solution

13. Red light is used in traffic signals because _____.

A. It has highest wavelength

B. scatters least

C. red is symbol of danger

D. both a & b

Answer: D

Watch Video Solution

14. A star appears twinkling in the sky because of _____ by the atmosphere .

A. scattering of light

B. reflection of light

C. refraction of light

D. both a & b

Answer: C

Watch Video Solution

15. When a beam of light is passed through a colloidal solution , the light will be _____.

A. scattered

B. reflected

C. absorbed

D. unchanged

Answer: A

Watch Video Solution

16. If the energy of incident beam and the scattered beam are same, then the scattering of light is called as _____.

A. Ray light

B. Inelastic

C. Mie

D. Elastic

Answer: D

Watch Video Solution

17. The phenomenon of scattering of light by the sol particles is called

A. Ray light

B. Mie

C. Raman

D. Tyndall

Answer: D

Watch Video Solution

18. The scattering of light by pure light is _____ scattering .

A. Rayleigh's

B. Mie

C. Raman

D. Tyndall

Answer: C

Watch Video Solution

19. The scattered light in Raman scattering contains _____ lines

A. Rayleigh's

B. stokes

C. Antistokes

D. all the above

Answer: D

Watch Video Solution

20. Convex lens produces a _____ beam of light

A. convergent

B. divergent

C. scattered

D. dispersed

Answer: A

Watch Video Solution

21. A concave lens is a _____.

A. converging lens

B. diverging lens

C. inverting lens

D. magnifying lens

Answer: B

Watch Video Solution

22. In spherical lenses, all distance are measured from _____.

A. optic centre

B. principal focus

C. principal axis

D. centre of curvature

Answer: A

Watch Video Solution

23. The part of the lens through which the ray of light passes without suffering deviation is called _____.

A. focus

B. centre of curvature

C. Pole

D. optic centre

Answer: D

Watch Video Solution

24. Convex lens always forms a real image , if the object is situated beyond _____.

A. optic centre

B. centre of curvature

C. focus

D. radius of curvature

Answer: C

Watch Video Solution

25. A convex lens forms a virtual image, if the object is _____

A. at F

B. At infinity

C. between F and 2F

D. between the lens and the principal focus

Answer: D

Watch Video Solution

26. The image formation by spherical lenses is due to the phenomenon of _____.

A. reflection

B. refraction

C. interference

D. disperison

Answer: B

Watch Video Solution

27. According to snell's law, _____

A. $\mu = \frac{\sin i}{\sin r}$

B. $\mu = \frac{c_a}{c_m}$

C. $\mu = \frac{\sin r}{\sin i}$

D. $\mu = \frac{c_m}{c_a}$

Answer: A

Watch Video Solution

28. When a ray of light entes glass from water, it bends _____.

A. towards the normal due to decrease in the speed of light

B. towards the normal due to increase in the speed of light

C. Away from the normal due to increase in the speed of light

D. Away from the normal due to decrease in the speed of light.

Answer: A

Watch Video Solution

29. Where should an object be placed so that a real and inverted image of same size is obtained by a convex lens.

A. At F

B. At 2F

C. below O and F

D. At infinity

Answer: B

Watch Video Solution

30. The point at which the principal axis meets the surface of the lens is _____.

A. centre of curvature

B. radius of curvature

C. focus

D. pole

Answer: D

Watch Video Solution

31. When a person uses a convex lens as a simple magnifying glass, the object must be placed at a distance _____.

A. less than one focal length

B. more than one focal length

C. less than twice focal length

D. more than twice the focal length

Answer: A

Watch Video Solution

32. The distance between the lens and focus is called _____.

A. pole

B. radius of curvature

C. focal length

D. principal axis

Answer: C

Watch Video Solution

33. Highly enlarged image is obtained by convex lens when object is at _____.

A. infinity

B. F

C. between F and C

D. beyond 2F

Answer: B

Watch Video Solution

34. Convex lens forms a highly diminished , real and inverted image, an object is at _____.

A. infinity

B. F

C. between F & C

D. beyond 2F

Answer: A

Watch Video Solution

35. Convex lenses are used in _____.

A. camera

B. magnifying lens

C. microscope

D. all the above

Answer: D

Watch Video Solution

36. Real images formed by convex lenses are always _____.

A. an the same side of the object

B. inverted

C. erect

D. smaller than the object

Answer: B

Watch Video Solution

37. An object is placed at 12 cm from a convex lens whose focal length is 10 cm . The image must _____ .

A. Virtual and enlarged

B. real and reduced in size

C. virtual and reduced size

D. real and enlarged size

Answer: D

Watch Video Solution

38. The image produced by a concave lens is _____ .

A. always virtual & enlarged

B. always virtual & diminished

C. always real

D. always virtual & sometimes virtual

Answer: B

Watch Video Solution

39. An object is placed 25 cm from a convex lens whose focal length is 10 cm . The image distance is _____ cm.

A. 50

B. 16.16

C. 6.66

D. 10

Answer: B

Watch Video Solution

40. Magnificatio produced by a lens is

A. $\frac{\text{height of the image}}{\text{height of the object}}$

B. $\frac{\text{Distance of the image}}{\text{Distance of the object}}$

C. Both a & b

D. $\frac{1}{v} - \frac{1}{f} = \frac{1}{u}$

Answer: C

Watch Video Solution

41. Lens formula is

A. $\frac{h'}{h}$

B. $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$

C. $\frac{v}{u}$

D. $(\mu - 1)\left(\frac{1}{R_1} - \frac{1}{R_2}\right)$

Answer: B

Watch Video Solution

42. Lens formula is

A. $\frac{h'}{h}$

B. $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$

C. $\frac{v}{u}$

D. $\frac{1}{f} = (\mu - 1)\left(\frac{1}{R_1} - \frac{1}{R_2}\right)$

Answer: D

Watch Video Solution

43. In a concave lens when an object is between optic centre and infinity , the image will be _____ .

A. at F

B. at 2F

C. between O & F

D. beyond 2F

Answer: D

Watch Video Solution

44. The reciprocal of the focal length of the lens is _____ .

A. Magnification

B. Power

C. principal focus

D. None

Answer: B

Watch Video Solution

45. The image formed by retina of human eye is _____ .

A. Virtual and eract

B. Real & inverted

C. Virtual and inverted

D. Real and erect

Answer: B

Watch Video Solution

46. The least distance of distinct vision is _____ .

A. 25 m

B. 20 cm

C. 20 m

D. 25 cm

Answer: D

Watch Video Solution

47. The change in the focal length of human eye is caused by _____ .

A. Pupil

B. Ciliary muscles

C. Cornea

D. Iris

Answer: B

Watch Video Solution

48. The phenomena of light responsible for the working of the human eye is _____

A. reflection

B. refraction

C. Power

D. Accommodation

Answer: B

Watch Video Solution

49. Amount of light entering into the eye is controlled by _____.

A. Ciliary muscles

B. Pupil

C. Cornea

D. Iris

Answer: B

Watch Video Solution

50. The part of the eye refracts light entering the eye from external objects ?

A. Lens

B. Cornea

C. Iris

D. Pupil

Answer: B

Watch Video Solution

51. The diameter of eyeball is _____.

A. 2.3 cm

B. 23 cm

C. 2.3 mm

D. 21 mm

Answer: A

Watch Video Solution

52. A person cannot see objects clearly beyond 50 cm . The powe of lens to correct the vision is _____.

A. $+5D$

B. $-0.5D$

C. $-2D$

D. $+2D$

Answer: C

Watch Video Solution

53. The human eye forms the image of an object at its _____-- .

A. Cornea

B. Iris

C. Pupil

D. Retina

Answer: D

Watch Video Solution

54. When a person is myopia, he/she can clearly see _____ .

A. Both nearby & far off

B. Only nearby objects

C. Only far off objects

D. Neither nearby nor for off objects.

Answer: B

Watch Video Solution

55. In Astigmatism eye cannot see _____.

A. distance object

B. nearby object

C. parallel lines

D. both a & b

Answer: C

Watch Video Solution

56. The defect of myopia can be corrected by using _____ .

A. Concave lens

B. Convex lens

C. Combination of lenses

D. None

Answer: A

Watch Video Solution

57. A convex lens is used to correct the defect of _____ .

A. Presbyopia

B. Hypermeteropia

C. Myopia

D. Astigmatism

Answer: B

Watch Video Solution

58. Presbyobia is due to _____ .

A. Lengthening of eye ball

B. Shortening of eye ball

C. Ageing

D. Development of Cataract

Answer: C

Watch Video Solution

59. Presbyobia is corrected by _____ .

A. Concave lenses

B. Bifocal lenses

C. Convex lenses

D. Cylindrical lenses

Answer: B

Watch Video Solution

60. Cylindrical lens is used to correct

A. Myopia

B. Hypermetropia

C. Presbyopia

D. Astigmatism

Answer: D

Watch Video Solution

61. Simple microscope consists of

A. Short focal length of convex lens

B. Large focal length of concave

C. Large focal length of covnex

D. Short focal length of concave

Answer: A

Watch Video Solution

62. Simple microscope are used

A. To observe parts of flower

B. Watch repair

C. Observe finger prints

D. all the above

Answer: D

Watch Video Solution

63. Magnification power of microscopes can be included by using of lengths _____.

A. Large focal length eye piece

B. Objective lens

C. Shorter focal length of the eye piece

D. Large focal length of objective

Answer: A

Watch Video Solution

64. To view heavenly objects like stars, _____ is used

A. Simple microscope

B. Compound microscope

C. Terrestrial telescope

D. Astronomical telescope

Answer: D

Watch Video Solution

65. To increase the magnification of the telescope _____

A. Increase the focal length of the objective

B. Increase the focal length of the eye piece

C. Decrease the focal length of the eye piece

D. both a & b

Answer: A

View Text Solution

66. _____ are used to view the objects on the surface of the earth.

A. Simple microscope

B. Compound microscope

C. Terrestrial telescope

D. Astronomical telescope

Answer: C

Watch Video Solution

67. The resolving power depends on _____

.

A. diameter of the lens

B. wavelength

C. refractive index

D. a & b

Answer: D

View Text Solution

68. A lens which collects image at back of telescope is

A. Objective lens

B. Diverging

C. Converging

D. Polars

Answer: A

View Text Solution

69. In compound microscope , as compare to eye piece, objective lens has _____ focal length

A. $-ve$ focal length

B. Zero

C. Small

D. Large

Answer: C

View Text Solution

70. A magnifying glass is also called as _____ .

A. Telescope

B. Compound microscope

C. Simple mircroscope

D. Astronomical telescope

Answer: C

Watch Video Solution

71. As compare, to single lens, compound microscope gives _____ magnifcation

A. Smaller

B. Greater

C. No

D. Equal

Answer: B

Watch Video Solution

72. As compare to single lens, compound microsocpe gives _____

A. Smaller of eye lens of an adult human being is a 3D

B. 4D

C. 5D

D. 6D

Answer: B

Watch Video Solution

73. In a simple microscope to obtain higher magnification, the focal length of convex lens should be _____-

A. Large

B. Small

C. 1 cm

D. None

Answer: B

Watch Video Solution

74. The image formed by an objective of a compound microscope is

A. Simple microscope

B. Compound microscope

C. Astronomical microscope

D. both b & c

Answer: C

 Watch Video Solution

75. Device used to see very very small object is _____ .

A. Simple microscope

B. Compound microscope

C. Telescope

D. Mirror

Answer: B

Watch Video Solution

76. In compound microscope, _____lenses are used.

A. 2

B. 3

C. 4

D. 1

Answer: A

Watch Video Solution

77. Image formed in simple microscope is _____ .

A. Erect

B. inverted

C. Smaller than object

D. Bright

Answer: A

Watch Video Solution

78. Objective lens of telescope is of _____ .

A. Short focal length & short aperture

B. Short focal length & large aperture

C. Large focal length & large apertuer

D. Large focal length & short aperture

Answer: C

Watch Video Solution

79. Presbyobia is corrected by _____ .

A. Covcave

B. bi focal

C. convex

D. Cylindrical

Answer: B

Watch Video Solution

80. To increase the magnification of the telescope, the focal length of the _____

A. Objective lens is small and eye lens is large

B. Objective lens is large and eye lens is small

C. Objective lens and eye lens are small

D. Objective lens and eye lens are large

Answer: B

Watch Video Solution

81. Among visible light, _____ has the lowest wavelength.

A. red

B. green

C. Blue

D. Violet

Answer: D

Watch Video Solution

82. The second law of refraction is also known as _____.

A. law of reflection

B. law of disperions

C. miescattering

D. snell's law

Answer: D

Watch Video Solution

83. _____ is an optical instrument used to see distant objects.

A. Microscope

B. Telescope

C. Kaleidoscope

D. none of the above

Answer: B

Watch Video Solution

84. The speed of light in vaccum is _____ ms^{-1}.

A. 3×10^8

B. 388×10^8

C. 0.38×10^8

D. 3.6×10^8

Answer: A

Watch Video Solution

85. Light is characterized by _____ and frequency.

A. waves

B. wavelength

C. speed

D. distance

Answer: B

Watch Video Solution

86. The ratio of speed of light in vaccum to the speed of light medium is _____ .

A. velocity

B. reflective index

C. refractive index

D. scattering property.

Answer: C

Watch Video Solution

87. _____ lenses are used as eye lens of 'Galilean Telescope'

A. convex

B. Concave

C. Bifocal

D. Both (a) and (b)

Answer: B

Watch Video Solution

88. Power of accommodation is achieved by changing the _____ of the eye lens.

A. curvature

B. retina

C. focal length

D. vision

Answer: C

Watch Video Solution

89. The refractive index of a medium is dependent on the _____ .

A. wavelength

B. velocity

C. frequency

D. none of the above

Answer: A

Watch Video Solution

90. _____ scattering is responsible for the white appearance of the clouds.

A. Rayleigh

B. Mie

C. Tyndall line

D. Raman

Answer: B

Watch Video Solution

91. The spectral lines having frequency equal to the incident ray frequency is called _____ .

A. Antistoke

B. Stoke

C. Rayleigh line

D. Mie

Answer: C

Watch Video Solution

92. If one of the focus of a bi-covnex lens is plane, it is known as a _____ .

A. concave

B. convex

C. plano-concave

D. plano-concave

Answer: C

Watch Video Solution

93. _____ lenses are used in camera lenses.

A. Concave

B. Bifocal

C. Convex

D. none of the above

Answer: C

Watch Video Solution

94. The defect of myopia can be corrected by using _____ .

A. concave

B. convex

C. Both

D. Both (a) and (b)

Answer: A

Watch Video Solution

95. When an object is placed at infinity a _____ is formed at the focus in concave lens.

A. real

B. virtual

C. enlarged

D. diminished

Answer: B

Watch Video Solution

96. Where should an object be placed on the axis of a convex lens of focal length 8 cm, so as to achieve magnification of -4? (Distances are measured from optic centre of the lens)

A. focus

B. curvature

C. beyond curvature

D. optical centre

Answer: D

 Watch Video Solution

Additional Questions Answer Fill In The Blanks Covers Whole Unit

1. Blue and green light has different _____ and _____ .

Watch Video Solution

2. Refraction is due to difference in _____ of light in different media.

Watch Video Solution

3. Angle of refraction is _____ for red and _____ for violet.

Watch Video Solution

4. The refractive index of a medium is dependent on the _____ .

Watch Video Solution

5. The interacting particles of the medium is called as _____.

Watch Video Solution

6. The amount of scattering of light depends on _____ and _____.

Watch Video Solution

7. White appearance of the clouds is due to _____ .

Watch Video Solution

8. The magnification is greater than 1, then the image obtained is _____.

Watch Video Solution

9. The magnification is _____ than 1, then the image obtained is diminished.

Watch Video Solution

10. The object is always placed on _____ side of the lens.

Watch Video Solution

11. The power of convex lens is _____.

Watch Video Solution

12. The power of concave lens is _____.

Watch Video Solution

13. Unit of power of the lens is _____ .

Watch Video Solution

14. 1 D is equal to _____ .

Watch Video Solution

15. The diameter of eye ball in our eye is _____.

Watch Video Solution

16. Meninges membranes protect the brain from____

Watch Video Solution

17. A thin and transparent layer on the surface of eyeball is _____ .

Watch Video Solution

18. _____ is the coloured portion of the eye.

Watch Video Solution

19. Amount of light entering into the eye is controlled by _____.

Watch Video Solution

20. Central part of eye and pathway for the light to retina is _____.

Watch Video Solution

21. The human eye forms the image of an object at its _____-- .

Watch Video Solution

22. Ciliary muscles help to change the _____ of the eye lens according to the position of the object.

Watch Video Solution

23. The refractive index of eye lens is _____ .

Watch Video Solution

24. Eye lens is _____ in nature.

Watch Video Solution

25. The change in the focal length of human eye is caused by _____ .

Watch Video Solution

26. Eye lens is made of a _____ material .

Watch Video Solution

27. When the ciliary muscle relaxes, eye lens becomes _____ .

Watch Video Solution

28. The change in the focal length of human eye is caused by _____ .

Watch Video Solution

29. A normal human eye can see clearly when objects are placed between _____ and _____ .

Watch Video Solution

30. What is near point and far point of a human eye ?

Watch Video Solution

31. The least distance of distinct vision is _____ .

Watch Video Solution

32. What is myopia? What is its remedy?

Watch Video Solution

33. The defect of myopia can be corrected by using _____ .

Watch Video Solution

34. Hypermeteropia is corrected by _____ lens.

Watch Video Solution

35. Presbyobia is corrected by _____ .

Watch Video Solution

36. What is Astigmatism ? How it is corrected ?

Watch Video Solution

37. According to optical property , telescope is classified into _____ and _____ .

Watch Video Solution

38. According to the things _____ and _____ are major types of telescopes.

Watch Video Solution

39. To view heavenly objects like stars, _____ is used

Watch Video Solution

40. The image in an astronomical telescope is _____ .

Watch Video Solution

41. Terrestrial telescope is used to view objects _____ .

Watch Video Solution

42. The image of terrestrial telescope is _____.

Watch Video Solution

43. The focal length of objective lens is _____ than the eye pieces in compound microscope.

Watch Video Solution

44. Lenses are classified into _____ types.

Watch Video Solution

45. Convex lens is also called as _____ lens.

Watch Video Solution

46. The band of colours is termed as _____ .

Watch Video Solution

47. Concave lens is also called as _____lens.

Watch Video Solution

48. _____ lens is thicker at the centre than at the edges.

Watch Video Solution

49. Magnification is denoted by the letter _____.

Watch Video Solution

50. If one of the focus of a bi-covnex lens is plane, it is known as a _____ .

Watch Video Solution

51. Light travels in the form of _____ .

Watch Video Solution

52. Scattering can be classified into _____ types.

Watch Video Solution

53. Objects which emit their own light are called _____ objects.

Watch Video Solution

54. _____ lens is thinner at the centre than at the edges.

Watch Video Solution

55. The Stars and the sun are _____ .

Watch Video Solution

56. Light is a form of _____ .

Watch Video Solution

57. Light travels along a _____ line.

Watch Video Solution

58. 1D is the power of a lens whole focal length is _____.

Watch Video Solution

59. Light does not need a _____ for propagation .

Watch Video Solution

60. The speed of light in vaccum is _____ ms^{-1}.

Watch Video Solution

61. The velocity of light is given by _____ .

Watch Video Solution

62. Among visible light, _____ has the lowest wavelength.

Watch Video Solution

63. When a ray of light travels from one transparent medium into another obliquely,

the path of the light undergoes _____.

Watch Video Solution

64. The deviation of a ray of light is called _____ .

Watch Video Solution

65. The velocity of light is more in _____ medium.

Watch Video Solution

66. The second law of refraction is also known as _____.

Watch Video Solution

67. The speed of light is low, if the _____ of the medium is high.

Watch Video Solution

68. The velocity of light is less in _____ medium.

Watch Video Solution

69. When light travels from rarer to denser medium, the refracted ray is _____ the normal.

Watch Video Solution

70. _____ is the fundamental and natural source of light.

Watch Video Solution

71. _____ is an example of a composite source.

Watch Video Solution

72. The angle of refraction is determined in terms of the _____ of the medium.

Watch Video Solution

73. The source of light produces a light of single colour, it is known as a _____ source.

Watch Video Solution

74. _____ light is a composite light which consists of light of various colours or wavelengths.

Watch Video Solution

75. If the energy of incident beam and the scattered beam are same, then the scattering of light is called as _____.

Watch Video Solution

76. The _____ and _____ of the scatterer results in different types of scattering.

Watch Video Solution

77. At sunrise and sunset , the light rays from the sun have to travel a _____ in the atmosphere is known as _____ scattering.

Watch Video Solution

78. The scattering of sunlight by the atoms or molecules of the gases in the earth's atmosphere is known as _____ scattering.

Watch Video Solution

79. The amount of scattering of light is inversely proportional to the _____ power of its wavelength.

Watch Video Solution

80. According to Rayleigh's law, the shorter wavelength colours are scattered _____ than the longer wavelength colours..

Watch Video Solution

81. When sunlight passes through the atmosphere , the _____ colour is scattered at a greater extent than the red colour.

Watch Video Solution

82. Mie scattering is also called as _____ scattering .

Watch Video Solution

83. Milk, ice cream , muddy water are _____

.

Watch Video Solution

84. The spectral lines having frequency equal to the incident ray frequency is called _____

.

Watch Video Solution

85. The spectral lines which are having frequences other than the incident ray frequency are called _____ .

Watch Video Solution

86. The lines having frequencies lower than the incident frequency is called _____ lines.

Watch Video Solution

87. The lines having frequencies higher than the incident frequency is called _____ lines.

Watch Video Solution

88. _____ is an optically transparent medium bounded by two spherical refracting surfaces or one plane and one spherical surface.

Watch Video Solution

89. When rays parallel to the principal axis strikes a concex lens, the refracted rays are _____ .

Watch Video Solution

90. When an object is placed beyond C, a real and inverted images is formed between _____ and the principal focus for convex lens.

Watch Video Solution

91. _____ lenses are used in making microscope and telescope.

Watch Video Solution

92. When an object is placed between F and C, the size of the image is _____ than that of the object for a convex lens.

Watch Video Solution

93. If one of the focus of a bi-covnex lens is plane, it is known as a _____ .

Watch Video Solution

94. In a _____ lens , one of the faces of a bi-concave lens is plane.

Watch Video Solution

95. Concave lenses are used as eye lens of _____ telescope.

Watch Video Solution

96. When a ray of light strikes the _____ lens obliquely at the optical centre, it follows without any deviation.

Watch Video Solution

97. When a object is placed in between principal focus and optical centre of convex lens, a _____ is formed .

Watch Video Solution

98. _____ lenses are used is placed at infinity a _____ is formed at the focus .

Watch Video Solution

99. When an object is placed at infinity a _____ is formed at the focus in concave lens.

Watch Video Solution

100. The size of the image formed _____ as the distance between the object and the lens decreases in convex lens.

Watch Video Solution

101. _____ lenses are used as wide angle spy hole in doors.

Watch Video Solution

102. The ability of a lens to converge and diverge is called as its _____ .

Watch Video Solution

103. _____ lenses are used in camera lenses.

Watch Video Solution

104. The distance _____ and perpendicular to the principal axis is taken as positive.

Watch Video Solution

105. _____ is defined as the ratio of the heigth of the image to the heigth of a object.

Watch Video Solution

106. Any optically _____ will have a refractive index.

Watch Video Solution

107. Convex lens mostly produces _____ image.

Watch Video Solution

108. Power of a lens is numerically defined as the reciprocal of its _____ .

Watch Video Solution

109. _____ and the lens maker's formula are applicable to only thin lenses.

Watch Video Solution

110. _____ protects the internal parts of the eye.

Watch Video Solution

111. _____ is the coloured portion of the eye.

Watch Video Solution

112. A thin and transparent layer on the surface of eyeball is _____ .

Watch Video Solution

113. Central part of eye and pathway for the light to retina is _____.

Watch Video Solution

114. Eye lens is fixed between the _____muscles.

Watch Video Solution

115. Eye lens is _____ in nature.

Watch Video Solution

116. The ability of the eye lens to focus nearby as wll as the distant objects is called _____ of the eye.

Watch Video Solution

117. _____ is the centre part of the iris.

Watch Video Solution

118. Power of accommodation is achieved by changing the _____ of the eye lens.

Watch Video Solution

119. The least distance of distinct vision is _____ .

Watch Video Solution

120. The tiny dust particles present in the air of the room scatter the beam of light is an example of _____.

Watch Video Solution

121. Cylindrical lenses are also called as _____ lenses.

Watch Video Solution

122. Both the defects of vision-myopia as well as hypermetropia can be corrected by _____.

Watch Video Solution

123. A _____ microsocpe has a convex lens of a short focal length.

Watch Video Solution

124. Magnification power of microscope has _____ to _____ times more magnification power than simple microscope.

Watch Video Solution

125. Compound microscope has _____ to _____ times more magnification power than simple microscope.

Watch Video Solution

126. A _____ microscope is used to measure very small length with high degree of accuracy.

Watch Video Solution

127. The least count of a travelling microscope is _____

Watch Video Solution

128. _____ is an optical instrument used to see distant objects.

Watch Video Solution

129. The first telescope was invented by _____ in 1608.

Watch Video Solution

130. _____ made a telescope to observe distant stars.

Watch Video Solution

131. The _____ invented telescope was similar to the astronomical telescope.

Watch Video Solution

132. A _____ microscope works based on the principle of vernier.

Watch Video Solution

133. The minimum distance required to see the objects distinctly without strain is called _____.

Watch Video Solution

134. _____ is know as long sightedness.

Watch Video Solution

135. Aged person cannot see the nearby objects . It is called _____.

Watch Video Solution

136. _____ mirrors are used in relfecting telescope.

Watch Video Solution

137. Galilean telescope, Keplerian telescope are some of the example of _____ telescope.

Watch Video Solution

138. The ratio of speed of light in vaccum to the speed of light medium is _____ .

Watch Video Solution

139. The energy of incident and scattered beam of light are not same, that scattering is called ___.

Watch Video Solution

140. Mie scattering is caused by _____ ,_____ and _____.

Watch Video Solution

141. The scattering of light contains additional frequencies than incident frequency is called _____.

Watch Video Solution

142. When light passing through _____ Reflected wave will be parallel in convex lens.

Watch Video Solution

143. The band of colours is termed as _____

.

Watch Video Solution

Additional Questions Answer State Whether The Following Statements Are True Or False Correct The Statement If It Is False

1. Stars and sun are non-luminous objects.

View Text Solution

2. Light always travelss along curved line.

View Text Solution

3. Material medium is needed for the propagation of light.

View Text Solution

4. Different coloured light has same wavelength and frequency.

View Text Solution

5. Incident ray and refracted ray lie in different plane.

View Text Solution

6. The speed of light in a medium is low because of low refractive index of the medium.

Watch Video Solution

7. When white light pass through transparent medium, it is split into colours is called dispersion.

Watch Video Solution

8. Amount of scattering of light is directly proportional to fourth power of its wavelength.

View Text Solution

9. In inelastic scattering, the energy of incident and scattering light are same.

View Text Solution

10. The amount of scattering is independent of wavelength in Rayleight scattering.

View Text Solution

11. In Raman Scattering , the scattered light contains the lines having frequency less than

incident is Antistokes.

View Text Solution

12. The line joining the centre of curvature and the optic centre is pole.

View Text Solution

13. When a ray strikes the pole or optic centre of the concave or convex lens it gets deviated.

View Text Solution

14. Concave lenses are used in camera lenses.

View Text Solution

15. Concave lens is used to correct hypermetropia.

View Text Solution

16. If magnification is greater than one diminished image will be obtained.

View Text Solution

17. The unit of power of the lens is m.

View Text Solution

18. Rayleigh's scattering is inelastic scattering.

View Text Solution

19. The distance between optic centre and centre of curvature is called as 'focal length'.

View Text Solution

20. Concave lens is used as 'Magnifying lens'.

View Text Solution

21. The final image formed by the astronomical telescope is 'erect image'.

View Text Solution

Additional Questions Answer Match The Following

1. 

View Text Solution

2. 

View Text Solution

3. 

View Text Solution

4. 

View Text Solution

5. 

View Text Solution

6. 

View Text Solution

7. 

View Text Solution

8. 

View Text Solution

9. 

View Text Solution

10. 

View Text Solution

11. 

View Text Solution

12. 

View Text Solution

13. 

View Text Solution

14. 

View Text Solution

Additional Questions Answer Assertion And Reason

1. Assertion : The air buble shines in water.

Reason : Air bubble in water shines due to refraction of light.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A::B::C::D

 Watch Video Solution

2. Assertion : Blue colour of sky appears due to scattering of blue colour.

Reason : Blue colour has shortest wavelength in visible sky.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of

assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A

 Watch Video Solution

3. Assertion : During sun set, sun appears red.

Reason : Scattering of light is directly proportional to the wavelength.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: C

 Watch Video Solution

4. Assertion : The stars twinkle while the planets do not.

Reason: The stars are much bigger in size than the planets.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of

assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: B

 Watch Video Solution

5. Assertion :The cloud in sky generally appears white.

Reason : Due to diffraction of clouds [The light is scattered by the droplets inside the cloud].

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: C

 Watch Video Solution

6. Assertion : Diamond glitters brilliantly.

Reason :Diamond does not absorb sunlight.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A

Watch Video Solution

7. Assertion : There is an apparent change in frequency whenever there is a relative motion between a source & listener.

Reason : SONAR & RADAR works under the principle Doppler effect.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: B

View Text Solution

8. Assertion : The resolving power of a telescope is more if the diameter of the objective lens is more.

Reason : Objective lens of large objective lens is more.

Reason : Objective lens of large diameter collects more light.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A

 Watch Video Solution

9. Assertion :Property of lens, whether the ray is converging or diverging is independent of the surrounding medium.

Reason : The converging property of a convex lens does not be same in all media.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of

assertion.

C. Assertion is false but reason is true

D. Both assertion and reason are false

Answer: C

Watch Video Solution

10. Assertion : A convex lens made of two different materials, A point object is placed on the principal axis, two images formed.

Reason:Two images formed by convex lens is always 'virtual'.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: C

Watch Video Solution

11. Assertion : Bending of light rays from its original path at the interface of the two media is called 'Refraction'.

Reason : Whenever the light travels from denser medium to rarer medium, it bends away from the normal.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A

 Watch Video Solution

12. Assertion : Mie scattering is responsible for the while appearance of the cloud.

Reason : Mie scattering is caused by pollen, dust,smoke.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of

assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A

 Watch Video Solution

13. Assertion : Astronomical telescope is used to view heavenly bodies.

Reason : Telescope is easily protable.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: C

 Watch Video Solution

14. Assertion : Colour of the sun is red at surface and sunset.

Reason : The light rays from the sun have to travel a larger distance in the atmosphere than at noon.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false

D. Both assertion and reason are false

Answer: A

 Watch Video Solution

Additional Questions Answer Use The Analogy To Fill In The Blank

1. Blue : _____ :: Red : longer wavelength

Watch Video Solution

2. Deviation of light : _____ :: Splitting of light : dispersion

Watch Video Solution

3. Biology : microscope :: Astronomy : _____

Watch Video Solution

4. Scattering of light by gas molecules : Rayleigh scattering :: Scattering of light by dust : _____

Watch Video Solution

5. Mercury vapour lamp : _____ :: Sodium vapour lamp : monochromatic light

Watch Video Solution

6. Stokes line : low frequency :: Anti-stokes line : _____

Watch Video Solution

7. Violet : lowest wavelength :: Red : _____

Watch Video Solution

8. Convex lens : converging , real image :: Concave lens : _____

Watch Video Solution

Watch Video Solution

9. Myopia : short sightedness :: Hypermeteropia : _____

Watch Video Solution

10. Thicker : convex :: Thinner : _____

Watch Video Solution

11. Violet : lowest wavelength :: Red : _____

Watch Video Solution

Additional Questions Answer Arrange The Following In Correct Sequence

1. Arrange the colours according to their wavelengths in ascending order.

Orange, Indigo, Blue, Green

Watch Video Solution

2. Arrange in order accordingly how a bulb gives out light waves.

Transerve waves, Filament heated, Light energy, Electric current.

View Text Solution

3. Arrange the properties of light accordingly , when light travels through any transparent medium.

Diffraction,Dispersion , Reflection, Refraction.

View Text Solution

4. Arrange in sequence , the steps to find the focal length of a convex lens.

Measure the distance between lens and screen, find the focal length 'f', focus the lens on a distant object, Adjust the screen to catch a clear image.

Watch Video Solution

Additional Questions Answer Give The Answe In One Or Two Lines

1. Which phenomenon is responsible for making the path of light visible ?

View Text Solution

2. State one function of iris in human eye.

View Text Solution

3. State one function of pupil.

View Text Solution

4. Why do stars twinkle ?

View Text Solution

5. What is elastic scattering ?

View Text Solution

6. Define : Principal focus of a convex lens.

View Text Solution

7. List the uses of concave lens.

View Text Solution

8. Fish in shallow water appears to closer than its real position. Give reason.

Watch Video Solution

Additional Questions Answer Very Short Answer

1. What is refraction of light ?

View Text Solution

2. What is meant by dispersion of light ?

View Text Solution

3. Why do we get the spectrum when white light is refracted by a transparent medium ?

Watch Video Solution

4. What is meant by Scattering of light ?

View Text Solution

5. Write different types of scattering depend upon the nature and size of the scatterer.

View Text Solution

6. What is meant by Rayleigh scattering ?

View Text Solution

7. Why does the cloud appear white instead of blue ?

View Text Solution

8. What is Tyndall scattering ?

Watch Video Solution

9. What is Colloid ? Give example.

Watch Video Solution

10. Define Raman scattering.

Watch Video Solution

11. What are stokes lines ?

Watch Video Solution

12. What is Geometrical Optics deal ?

Watch Video Solution

13. What is Plano-convex lens ?

Watch Video Solution

14. Define Optical centre (O).

Watch Video Solution

15. Define centre of curvature.

Watch Video Solution

16. Define Radius of curvature (R_1 and R_2).

View Text Solution

17. Define Principal axis and pole.

View Text Solution

18. Draw formation of images by a convex lens when the object is placed at infinity.

View Text Solution

19. Draw a ray diagram of formation of image by a convex lens.

View Text Solution

20. Write the lens Formula.

Watch Video Solution

21. Define Magnification of a lens.

Watch Video Solution

22. Write the lens maker's formula.

View Text Solution

23. Define Power of a lens

View Text Solution

24. What is the use of Retina.

View Text Solution

25. Write the function of Ciliary muscles.

View Text Solution

26. What is peristence of vision ?

View Text Solution

27. Why is cornea spherical ?

View Text Solution

28. Define Angular Magnification.

View Text Solution

29. What is the principle used in Microscope ?

View Text Solution

30. Derive the Magnification of a compound.

View Text Solution

31. What is the used of telescope ?

View Text Solution

32. What is Terrestrial Telescope ?

View Text Solution

33. What is the major difference between astronomical and terrestrial telescope ?

View Text Solution

34. Write the disadvantage of telescope.

Watch Video Solution

Additional Questions Answer Short Answer

1. What are the conclusions obtained from laws of refraction ?

Watch Video Solution

2. Name and explain the type of scattering .

Watch Video Solution

3. When does Mie scattering take place ? Write the causes.

Watch Video Solution

4. Explain the types of lens .

Watch Video Solution

5. Write the application of convex lenses.

Watch Video Solution

6. Draw images formation due to refraction through a concave lens.

View Text Solution

7. How do we see distant and closer objects ?

Watch Video Solution

8. What is near point and far point of a human eye ?

Watch Video Solution

9. What is 'Presbyopia ' ?

Watch Video Solution

10. The colour of the sun is reddish during the sun rise and sunset. Explain why ?

Watch Video Solution

11. Why is a normal eye not able to see clearly the objects placed closer than 25 cm ?

Watch Video Solution

12. What is Lens ? What are types of lenses ?

Watch Video Solution

13. What is the function of Cornea ?

Watch Video Solution

14. Explain the function of iris.

Watch Video Solution

15. What is Astigmatism ? How it is corrected ?

Watch Video Solution

16. Write the uses of simple microsocpe .

Watch Video Solution

17. Define Resolving power of a Telescope.

Watch Video Solution

Additional Questions Answer Long Answer

1. State the laws of refraction

Watch Video Solution

2. Explain Raman Scattering .

View Text Solution

3. Explain the sign Convention of lenses.

View Text Solution

4. Explain the working of the eye.

Watch Video Solution

5. Explain the construction of Simple Microscope.

Watch Video Solution

6. Explain the types of Telescope.

Watch Video Solution

7. Explain the refraction of light through a glass prism.

View Text Solution

Additional Questions Answer Numerical Problems

1. The refractive index of kerosene is 1.44 . Find the velocity of light through kerosene.

Watch Video Solution

2. The refractive index of kerosene is 1.44 & that of diamond is 2.42 . Calculate the refractive index of diamond with respect to kerosene.

Watch Video Solution

3. Speed of light in glass is $2 \times 10^8 ms^{-1}$. Find the refractive index of glass.

Watch Video Solution

4. A light travels from air into water, the angle of refraction is 25° to the normal. Find the angle of incidence. Refractive index of water is 1.33 . $\mu_a = 1$

Watch Video Solution

5. Light in air enters a diamond at 45° . What is the angle of refraction ? G.T $\mu_{\text{dia}} = 2.42.$

Watch Video Solution

6. A 5 cm tall object is placed fraction to the principle axis of a convex lens of focal length 20 cm . The distance of the object from the lens is 30 cm. Find the (i) position, (ii) Nature, (iii) Size of the image formed.

Given Object size , $h_0 = 5cm$

Object size , $h_1 = 5cm$

Object distance , u=-30 cm

Focal length of convex lens , f= 20 cm

To find : size of image $h_1 = ?$

Nature of image = ?

Position of image = ?

View Text Solution

7. An object is placed in front of a convex lens of a focal length 10 cm . What is the nature of the image formed if the object distance is 15 cm ?

Given

Object distance , mu= -15 cm

Focal length, f=10 cm

To find : Nature of the image = ?

Watch Video Solution

8. A concave lens has focal length of 20 cm . At what distance from the lens a 5 cm tall object be placed so that it forms an image at 15 cm from the lens ? Calculate the size of the image formed.

 Watch Video Solution

9. A person needs of power -4D for correcting his distant vision. For correcting his near vision he needs a lens of power + 1.5 D . What is focal length of the lens required for

correcting?

(i) Distant vision (ii) Near vision ?

Watch Video Solution

10. When an object is placed at 25 cm from a concave lens, a virtual image is produced at a distance of 10 cm. Calculate the magnification produced by the lens.

Watch Video Solution

11. An object is placed at 50 cm from a lens produces a virtual image at a distance of 10 cm in front of the lens . What is the focal length of the lens ? Is it converging or diverging ?

Watch Video Solution

Additional Questions Answer Higher Order Thinking Skills Hots

1. A convex lens of refractive index μ_1 is kept in a medium of refractive index (μ_2) . A parallel beam of light is incident on the lens . Draw the path of the rays of light emerging from a lens . If $\mu_1 > \mu_2$

View Text Solution

2. A convex lens of refractive index μ_1 is kept in a medium of refractive index (μ_2) . A parallel beam of light is incident on the lens . Draw the

path of the rays of light emerging from a lens .

If $\mu_1 = \mu_2$

View Text Solution

3. A convex lens of refractive index μ_1 is kept in a medium of refractive index (μ_2) . A parallel beam of light is incident on the lens . Draw the path of the rays of light emerging from a lens .

If $\mu_1 < \mu_2$

View Text Solution

4. A concave lens of refractive index μ_1 is kept in a medium of refractive index (μ_2) . A parallel beam of light is incident on the lens . Draw the path of the rays of light emerging from a lens . If $\mu_1 > \mu_2$

View Text Solution

5. A concave lens of refractive index μ_1 is kept in a medium of refractive index (μ_2) . A parallel beam of light is incident on the lens .

Draw the path of the rays of light emerging from a lens . If $\mu_1 = \mu_2$

View Text Solution

6. A concave lens of refractive index μ_1 is kept in a medium of refractive index (μ_2) . A parallel beam of light is incident on the lens . Draw the path of the rays of light emerging from a lens . If $\mu_1 < \mu_2$

View Text Solution