PHYSICS

BOOKS - MBD

THE HUMAN EYE AND THE COLOURFUL WORLD

Example

1. What is meant by power of accomodation of the eye?

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2. A person with myopic eye cannot see objects beyond 1.2 m distinctly. What should be the type of the corrective lens used to restore proper vision?

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3. What is the far point and near point of human eye with normal vision?

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4. A student has difficulty in reading the blackboard while sitting in the last row. What could be the defect the child is suffering from? How could is it be corrected?

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5. The human eye can focus object at different distances by adjusting the focal length of the eye lens this is due to:

A. presbyopia

B. accommodation

C. near-sightedness

D. far-sightedness

Answer:

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6. The human eye forms the image of an object at its:

A. cornen

B. irirs

C. pupil

D. retina

Answer:

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7. The least distance of distinct vision for a young adult with normal vision is about:

A. 25 cm

B. 2.5 cm

C. 25 m

D. 2.5 m

Answer:

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8. The change in focal length of an eye lens is caused by the action of the:

A. pupil

B. retina

C. ciliary muscles

D. iris.

Answer:

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9. A person needs a lens of power -5.5 d for correcting his distant vision. For correcting his near vision he needs a lens of power +1.5 D.

What is the focal length of lens required for correcting(i) distant and (ii) near vision?

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10. The far point of a myopic person in 80 cm in front of the eye. What is the nature and power of the lens required to correct the problem?

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11. The near point of a hypermetropia eye is 1 m find the power of the lens required to correct this defect . Assume that near point of the normal eye is 25 cm

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

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

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14. What happens to the image distance in the eye when we increase the distance of an object form the eye?

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15. Explain atmospheric refraction.Why do stars twinkle?

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16. Why planets do not appear twinkling?

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17. Why does the sun appear reddish in the morning (as well as in evening)?

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18. Why does star appears red in colour?

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19. Why does the sky appears dark instead of blue to an astronaut?

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20. What is prism? Explain deviation in glass prism by drawing a ray diagram

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21. What is meant by dispersion of light explain with the help of diagram and give the cause of dispersion

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22. When a ray of light passes through a glass prism then a spectrum is obtained on the screen

Draw a diagram showing a spectrum of white light.

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23. When a ray of light passes through a glass prism then a spectrum is obtained on the screen

Name the seven colours of spectrum in a serial order

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24. When a ray of light passes through a glass prism then a spectrum is obtained on the screen

Which colour of the spectrum suffers most deviation and which colour the least deviation?

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25. Describe an experiment to show that different color of white light can be recombined to from white light.

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26. What is name of defect of eyes due to loss of elasticity of eye-lens? How is it corrected?

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27. What is the function of ciliary muscles in the eye?

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28. Why is eye considered the best gift of god?

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29. When we enter some dark room then for some time we are not able to see anything and rKHOaning there for long,if suddenly

strong light is switched on then our eyes can not see anything why?

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30. What type of lens is present in front of eyeball?

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31. What is the function of retina in human eye?

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32. Why do we experience difficulty when we read from too close?

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33. Why do aged person need spectacles for reading ?

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34. What is cataract? How is it corrected?

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35. What is the necessity of eye donation? Explain

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36. What things we should take into account while donating eyes?

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37. What is meant by least distance of distinct vision?

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38. A 14 years old boy cannot read question written on the black-board lying 5 m away from him. Name the eye defect he is suffering from.

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39. A 14 years old boy cannot read question written on the black-board lying 5 m away from him. Show with the help of a labelled diagram as to how this defect can be corrected.

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40. Why we see a rainbow just after rains?

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41. Why does day appear longer than actually what it is due to refraction light?

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42. A star appers on the horizon What is the true position of the star? Explain with diagam?

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43. Why does the colour of the sky appear blue?

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44. What is the cause of myopia? How can it be corrected ? Explain with a labelled diagram.

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45. What is the cause of myopia? How can it be corrected ? Explain with a labelled diagram.

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46. What is meant by presbyopia ?

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47. Define the following: Power of accommodation

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48. Define the following: far point

Watch Video Solution

49. Define the following:Near point

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50. Define the following : least distance of distinct vision

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51. A person wear spectacles of power-2.3 D Name the defect of vision he is suffering from.Draw the ray diagram for: The defective eye

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52. A person wear spectacles of power-2.3 D Name the defect of vision he is suffering from.Draw the ray diagram for: Its correction after using a suitable lens.

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53. Distiguish between simple microscope and compound microscope

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54. A person can not see clearly objects beyond a distance of 1.2 m.Name the defect of vision he is suffering from.What would be the power of correcting lens used to restore proper vision?

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55. The near point of a person suffering from hypermetropia is 75 cm. calculate the focal length and power of the lens required to

enable him to read the newspaper which is kept at 25 cm form the eye.

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56. The near point of a hypermetropia eye is 1 m find the power of the lens required to correct this defect . Assume that near point of the normal eye is 25 cm

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57. A person cannot see object beyond 1.5 m distinctly . What type of lens should be used to restore proper vision?

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58. What do you mean by optical instruments? Name any two.

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59. What is least distance of distinct vision?

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60. What is far point ?

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61. Write a function of each of: Retina

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62. Wrtie a funciton of each of: Sclerotic

Watch Video Solution

63. Write the function of ciliary muscles in human eye.

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64. What is the function of rods on the retina?

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65. What are cone cells?

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66. Why chickens come out late in the morning and return early in the evening?

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67. Explain why (or how): Bats can ascertain distances, directions, nature, and sizes of the obstacles without any “eyes”,

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68. Colour of eyes depend upon colour of which part of eye?

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69. What is basic cause of colour blindness?

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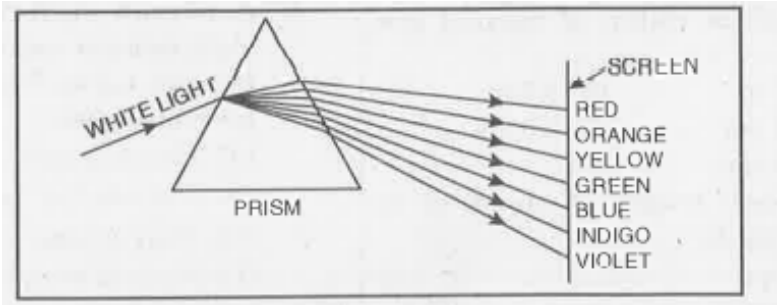
70. Which phenomenon of light is shown in fig below:



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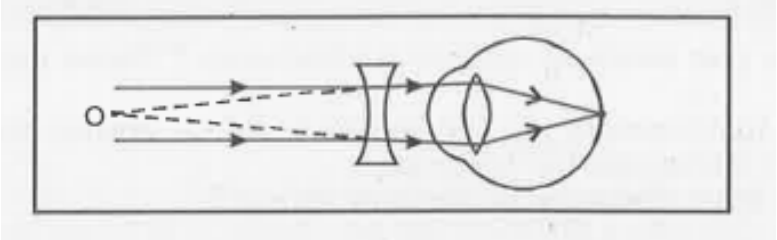
71. In the given diagram which defect of the human eye is being corrected using a concave lens?



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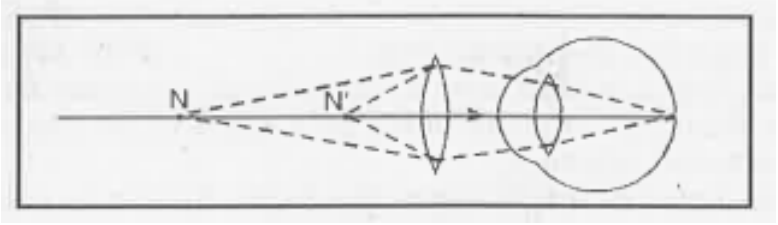
72. Which defect of human eye is being corrected in the figure given below?



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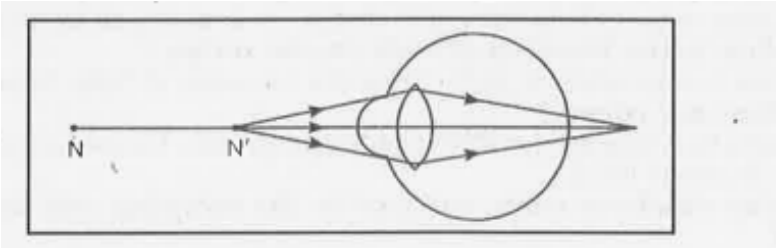
73. Which defect of the eye is shown in the figure given below?



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74. The approximate least distance of distinct vision of normal eye is.... .

A. 35 m

B. 3.5 m

C. 25 cm

D. 2.5 cm

Answer:

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75. The focal length of objective is chagned by:

A. pupil

B. retina

C. ciliary muscles

D. iris.

Answer:

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76. A person suffering form short sightedness cannot see objects beyond 1.2 m. for distinct vision he would use:

A. concave lens

B. cylinderical lens

C. convex lens

D. none of these

Answer:

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77. The far point of normal human eye is .... .

A. at 25 cm

B. at 25 mm

C. at 25 m

D. at infinity

Answer:

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78. In human eye the image of object is formed at:

A. pupil

B. retina

C. cornea

D. eye ball

Answer:

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79. Light entering the eye is mostly refracted by:

A. crystalline lens

B. outer surface of cornea

C. pupil

D. iris.

Answer:

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80. Most insensitive part of the eye is called:

A. black spot

B. yellow spot

C. cornea

D. blue spot

Answer:

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81. Focal length of the eye lens can be adjusted by action of:

A. ciliary muscles

B. choroid

C. optical nerves

D. retina

Answer:

Watch Video Solution

82. Light entering the eye is mostly refracted by:

A. crystallin lens

B. outer surface of cornea

C. outer surface of cornea

D. iris

Answer:

Watch Video Solution

83. Least distance of distinct vision of a normal eye is:

A. 25 m

B. 2.5 m

C. 25 cm

D. 2.5 cm

Answer:

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84. Least distance of distinct vision of a normal eye is:

A. 5 cm to 15 cm

B. 15 cm to 1 m

C. 20 cm to infinity

D.

Answer:

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85. When an object is placed beyond centre of curvature of a concave mirror, the image is formed:

A. beyond C

B. between c and f

C. at F

D. At infinity

Answer:

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86. The least distance of distnct vision is .....

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87. Far point of normal human eye is..... .

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88. In human eye,image of an object is formed

at ..... .

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89. The ability of eye-lens to adjust its focal length is called..... .

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90. A short-sighted person cannot see the ..... Object distinctly.

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91. The _____ shaped cells present in retina respond to the intensity of light.

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92. ___helps in regulating the amount of light entering the eye.

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93. The splitting of white light into its component colours is called ..... .

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94. A concave lens is used to rectify... .

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95. When the light is bright, the pupil becomes.... .

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