PHYSICS

BOOKS - PUNJAB BOARD PREVIOUS YEAR PAPERS

Optical Instruments

Exercise

1. Ram's near point is 50 cm. Find the nature and power of lens which would enable him to

read a book placed at 25 cm from his eyes.

2. Kumar's near point is 40 cm.Find the nature and power of lens which would enable him to read a book placed at 20 cm from his eyes.

3. Mangal's near point is 60 cm.Find the nature and power of lens which would enable him to

read a book placed at 20 cm from his eyes.

4. A nearsighted person has a far-point located 7.5 m from the eye : What would be the power, if a contact lens were used ?

5. A nearsighted person has a far-point located 7.5 m from the eye : What would be the power,

if a contact lens were used ?

6. A certain myopic person has a far point of 150 cm. What power of a corrective lens must have to allow him to see distant objects clearly ?

7. A certain myopic person has a far point of 150 cm. If he is able to read a book at 25 cm, while wearing the glasses, is his near point less than 25 cm. ?

8. A person can see objects clearly, when they are farther than 12.5m away. Is he nearsighted or farsighted?

9. A person can see objects clearly, when they are farther than 12.5 m away What type of lens and what type of power will allow the person to see distant objects clearly ?

10. Jaura's far point of a myopic eye is 10 cm from the eye. Findthe nature andpower of lens which would enable himto read abook placed at 25 from his eyes.

11. 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.

12. If aperson uses spectacles of Power $+1.0$ dioptre, what is the nearest distance of distinct vision for him ? Given that near point of the person is 75 cm from the eye.

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13. If far point of myopic person is 50 cm in front of the eye, what is the power of lens required to enable him to see very distant objects clearly ?

14. What is hypermetropia ?

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15. What is meant by presbyopia ?

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16. What is myopia ?

17. Define resolving power of compound microscope.

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18. What is simple microscope? Find an expression for its magnification.

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19. Define resolving power of telescope.

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20. What is myopia? What are its causes? Name the type of the lens to correct this defect.

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21. Define resolving power for a compound microscope. On what factors does it depends ?

22. What is Hypermetropia (Far sightedness) ? What are its causes ? How can it be corrected ?

23. What is Myopia (nearsightedness) ? What are its causes ? Explain with the help of diagram how it can be corrected ?

24. Give three points of difference between refracting type astronomical telescope and reflecting type astronomical telescope.

25. A person can see clearly only up to 3 m.What type of defect a person have ? Prescribe a lens for his spectacles, so that he can see clearly up to 12 m.

26. What is Hypermetropia (Far sightedness) ? What are its causes ? How can it be corrected ?

27. What is Myopia (nearsightedness) ? What are its causes ? Explain with the help of diagram how it can be corrected ?

28. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

29. What is Myopia (nearsightedness) ? What are its causes ? Explain with the help of diagram how it can be corrected ?

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

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31. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

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32. Define the magnifying power of compound microscope.

33. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

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34. Draw a labelled sketch of the human eye.

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35. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

36. Define magnification of an astronomical refracting type telescope and find an

expression for it when the final image is formed at least distance of distinct vision.

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37. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

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38. With the help of ray diagram, describe the constru   ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

39. What is Accomodation of eye? Write various defects of vision and their cause. How

the eye of person suffering from nearsightedness and farsightedness may be corrected ?

40. With the help of ray diagram, describe the constru   ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

41. With the help of ray diagram describe construction and working of refracting type Astronomical telescope. Find an expression for its magnifying power when final image is formed at infinity.

42. Define magnification of an astronomical refracting type telescope and find an

expression for it when the final image is formed at least distance of distinct vision.

43. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

44. With the help of ray diagram, describe the constru   ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

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45. What is Myopia (nearsightedness) ? What are its causes ? Explain with the help of

diagram how it can be corrected ?

46. With the help of ray diagram, describe the constru   ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

47. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

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48. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

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49. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

50. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at

least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

51. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

52. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

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

54. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

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55. Define the following: Power of accommodation

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56. Draw a labelled sketch of the human eye.

57. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm). Derive an expression for its magnifying power (m)

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59. Define magnification of an astronomical refracting type telescope and find an expression for it when the final image is formed at least distance of distinct vision.

60. With the help of ray diagram, describe the constru ction, working of acompound microscope when the final image is formed at least distance of distinct vision (D = 25 cm).

Derive an expression for its magnifying power (m)

61. What is least distance of distinct vision?

62. Define magnification of an astronomical refracting type telescope and find an

expression for it when the final image is formed at least distance of distinct vision.