

Optical Instruments Practice Questions

01. What are the different parts of human eye? 02. What type of image is formed on the retina of human eye? 03. Write a short note on cornea, crystalline lens, iris, ciliary muscle and retina of human eye. 04. Which part of human eye controls the amount of light that enter the human eye? 05. What will be average radius of human eyeball when the ciliary muscles are completely relaxed? 06. How does the focal length of the human eyeball change? 07. What are the two type of light sensitive cells that are present on the human retina and how does they work? 08. Define power of accommodation of normal human eye and how will you calculate it? 09. How does the human retina change with that of the retina of bee and chick? 10. What is the reason for a blurred, strained vision of human eye when you try to read a book very close to the eyes? 11. What is the near point and far point of human eye? Write their value for a normal human eye 12. Why does the power of accommodation of human eye decrease due to aging? 13. How many images are rolled per second in a motion picture? Why? 14. What is meant by colour blindness? 15. Why colour blind persons are not given driving license? 16. What is the effect of more number of rods than cones on the retina of a chick? 17. If the number of cones and rods of a chick's retina become equal what behavioural changes one can notice in it. 18. How can bees see in U V light also? 19. What is cataract and how can it be rectified? 20. List out the different defects of human eye. 21. What are the causes of Myopia, Hypermetropia, astigmatism and presbyopia? How can they be corrected? 22. What do you mean by the resolution of an optical instrument and how is it important in the construction of an optical instrument? 23. What is the essential component of an optical instrument in its construction with respect to viewing the objects? 24. What are the uses of microscopes? 25. What is power of the lens used in the simple microscope that gives the maximum magnification? 26. Draw the diagram of defective and corrective myopic and hypermetropic eye 27. Draw the ray diagram of a simple microscope for normal adjustment and for near point. A lens, which produces a magnification of 10 for a real image for an object distance of 10 cm. If it is used as a simple microscope will be giving the same magnification for normal adjustment position? 29. A person finds that his near point has moved out to 50cm from him. What is his problem? Calculate the power of corrective lens that he should be prescribed to correct his defect? 30. A person finds that his near point has come to 500cm in front of him. What is his problem? Calculate the power of corrective lens that he should be prescribed to correct his defect? 31. A person finds that the object's image placed at his normal near point converges at a distance of 0.5cm behind his retina? What is his defect? And prescribe him a correct lens of correct power? 32. A person finds that a star's image fall at a distance of 0.5cm in front of his retina? What is his defect and prescribe him a correct lens of correct power? 33. A person's vision range is 60cm to 300cm. What is his problem and prescribe him a correct lens of correct power and will you arrange the lenses? 34. A person is not able to read a book kept at his normal near point and also not able to see a star since the images of these objects converge 0.2cm either side of his retina. What is his defect and prescribe him a correct lens and how will you arrange them? 35. Define persistence of vision

About the Author

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