



# BIOLOGY

## BOOKS - NAND LAL PUBLICATION

### THE HUMAN EYE AND THE COLOURFUL WORLD

#### Intext Questions

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



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



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## Activity 11 1

1. Draw a diagram to show the incident ray refracted ray, emergent ray and angle of

deviation.



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2. Draw a diagram to show the incident ray refracted ray, emergent ray and angle of deviation.



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**Activity 11 2**

1. What do you observe ?



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2. Which colour is at the top of spectrum ?



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3. Which colour is at the bottom of spectrum of white light?



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## Activity 11 3

1. Name the lens used to observe scattering of light experimentally.



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2. How does scattering of light occur?



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3. Which kind of light is scattered more as its why?



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4. Why do we observe, blue light from three sides of the glass tank?



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**Exercises**

1. The human eye can focus on objects different distances by adjusting the focal length the eye lens. This is due to:

- A. presbyopia.
- B. accommodation.
- C. near-sightedness.
- D. far-sightedness.

**Answer: B**



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

A. cornea.

B. iris.

C. pupil.

D. retina.

**Answer: D**



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

A. 25 m.

B. 2.5 cm.

C. 25 cm.

D. 2.5 m.

**Answer: C**



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4. 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: C**



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



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



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7. Explain atmospheric refraction. Why do stars twinkle?



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8. Why planets do not appear twinkling?



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



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



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## Additional Questions

1. What is the fuction of retina in human eye?



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2. What is pupil ?



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3. Name the cells responsible for colour perception.



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4. What is blind spot ?





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5. What is meant by "far point of eye" ?



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6. What is colour blindness ?



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7. Explain, how does the eye adjust itself when person enters a dark cinema hall from bright sunshine.



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