

### **PHYSICS**

## **BOOKS - MBD NCERT SOLUTIONS**

# THE HUMAN EYE AND COLOURFUL WORLD

**Multiple Choice Questions** 

1. Retina is called:

- A. blind spot of eye
- B. dark spot of eye
- C. screen of eye
- D. transparent part of eye

#### **Answer: C**



- 2. Power of a lens is + 5 D, its focal length is:
  - A. 20 m

- B. 2 m
- C. 0.2 m
- D. none of these

#### **Answer: C**



- 3. Most insensitive part of the eye is called:
  - A. blind spot
  - B. Eye lens

- C. cornea
- D. Ciliary Muscles

#### **Answer: A**



- **4.** Focal length of the eye lens can be adjusted by action of :
  - A. ciliary muscles
  - B. choroid

C. optical nerves

D. retina

**Answer: A** 



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**5.** The reddening of the sum at sunrise is due to:

A. Accomodation

B. Scattering

C. Dispersion

D. Reflection

**Answer: B** 



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**6.** What is the formula for power of a lens?

A. 
$$\frac{1}{f}$$

A. 
$$\frac{1}{f}$$
B.  $\frac{f}{u}$ 

C. 
$$\frac{a}{f}$$

D. 
$$\frac{v}{f}$$

#### **Answer: A**



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**7.** The colour of white light which is deviated the maximum on passing through the glass prism is:

A. red

B. green

C. violet

D. blue

**Answer: C** 



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**8.** Splitting of white light into seven colours is called:

A. Reflection

B. Refraction

- C. Dispersion
- D. None

#### **Answer: C**



- **9.** What are that number of primary colours ?
  - **A.** 1
  - B. 2
  - C. 3

D. 4

#### **Answer: C**



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**10.** Which of the following is the colour of danger?

A. Red

B. White

C. Green

D. Blue

#### **Answer: A**



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11. Where is the image formed in a human eye

?

A. Cornea

B. Iris

C. Pupil

D. Retina

#### **Answer: D**



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## 12. Colour of the sky is blue due to

- A. Reflection
- B. Refraction
- C. Scattering
- D. Dispersion

#### **Answer: C**



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**13.** The blue colour of sky is due to :

A. Reflection of light

B. Scattering of light

C. Dispersion of light

D. Refraction of light

**Answer: B** 

**14.** The red colour of the sun at the time of sunrise and sunset is because:

A. Scattering

B. Dispersion

C. Refraction

D. Reflection

Answer: A



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

A. Cornea

B. Retina

C. Iris

D. Pupil

**Answer: B** 



**16.** The main reason behind the advanced sunrise and delayed sunset is . . . . . of light . Choose from the given options

- A. Reflection
- B. Refraction
- C. Deviation
- D. Scattering

#### Answer: D



# Very Short Answer Type Questions

1. Where is the image formed in a human eye?



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**2.** Write the nature of the image formed at the retina. How do we see the object upright?



**3.** What type of image is produced by the cornea and the lens on the retina?



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**4.** What kind of lens is used by a myopic person? Explain with a diagram.



**5.** How is hypermetropia corrected ? It is likely to occur in which age?



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**6.** What colour of sky is seen from the surface of moon ? Give reasons to support your answer



**7.** What is the function of the iris in human eye?



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**8.** Name the phenomenon of light is responsible for twinkling of stars. Why does it not cause planets to twinkle as well?



**9.** The prism spit the incident white light into a band of colours. Write these colours name in sequence.



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# **Short Answer Type Questions**

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



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



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



**4.** Why do stars twinkle?



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**5.** With a neat labelled diagram, explain twinkling of a star. Also explain why a planet does not twinkle.



**6.** Why does the sun appear reddish in the morning, as well as in evening?



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**7.** Why does the sky appear dark instead of blue to an astronaut ?



**8.** What part of the eye can be donated after death?



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**9.** Why we see a rainbow just after rains? Explain the phenomenon as well with a diagram



**10.** Why do you is the colour of sky blue and not black as in case of the moon?



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11. It should be easy to see objects which are close to our eyes. But we find it difficult to see objects that are too close to the eye. How can you explain this phenomenon?



**12.** What is colour-blindness?



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**13.** What is eye donation ?Why is it very important?



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**Long Answer Type Questions** 

**1.** Write the help of a well labelled diagram, explain the construction and working of the human eye .



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**2.** A person is not able to see for off objects clearly. From which defect of the eye the person is suffering ? How to correct this defect ?



- **3.** (a) Draw a diagram to show the formation of image of a distant object by a myopic eye. How can such an eye defect be remedied?
- (b) State two reasons due to which this eye defect may be caused.
- (c) A person with myopic eye cannot see objects beyond a distance of 1.5m. What would be the power of the corrective lens used to restore proper vision?



- **4.** A man can read the number of a distant bus clearly but he finds difficulty in reading a book.
- (a) From which defect of the eye is he suffering?
- (b) What type of spectacle lens should he use to correct the defect ?

