Answer Key 11.5

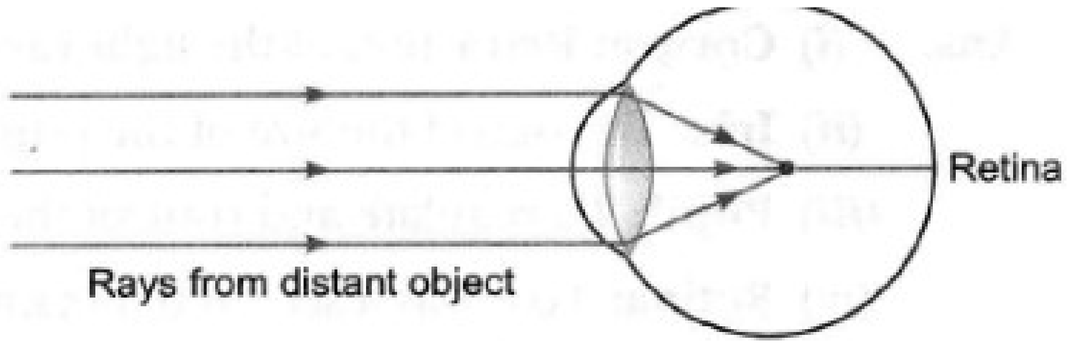
Marks - 25

Case study based questions

10th Science

Human Eye and Colourful World

Passage - 1 **5 Marks**



Anita has started facing difficulty reading the blackboard while sitting in the last row of her class. Using the information given, answer the following questions.

Q1. (1) Myopia

Q2. (2) By using concave lens of suitable focal length

Q3. (2) NO

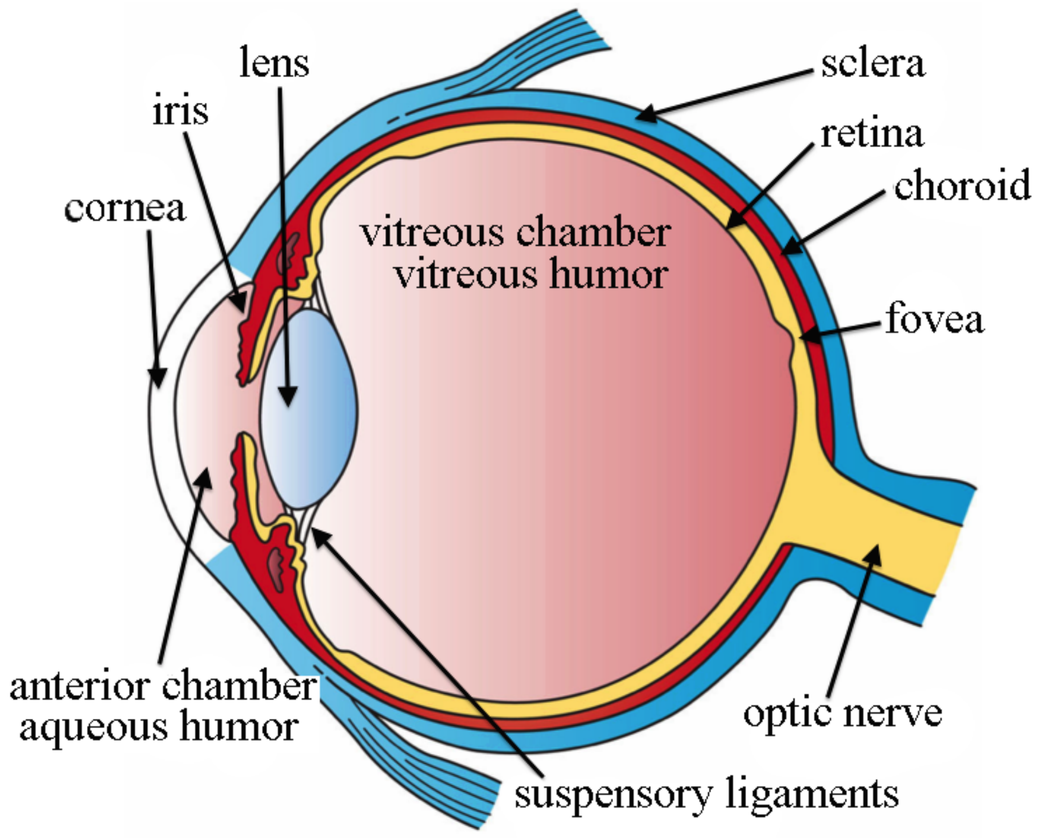
Q4. (2) Power of accommodation

Q5. (2) In front of the retina

Passage - 2 **5 Marks**

Answer Key 11.5

Marks - 25



Shivani cannot see objects placed closer than 25cm clearly. She goes to an optician to get her eyes checked, however she does not seem to have any power. Use this information to answer the questions given below:

Q1. (1) TRUE

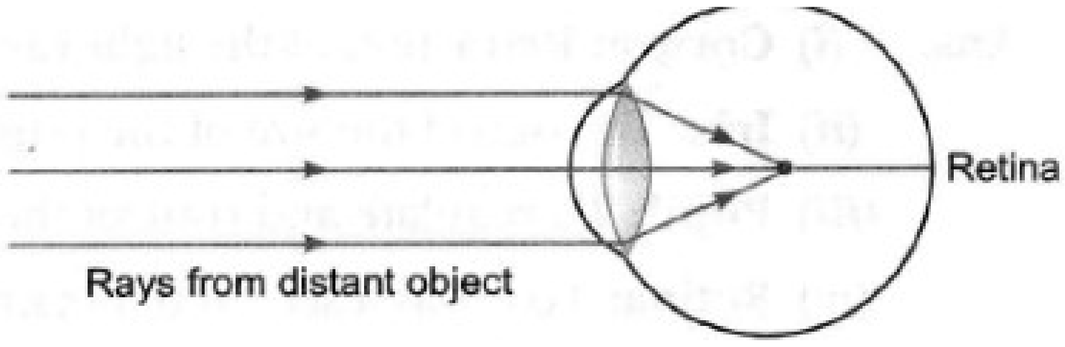
Q2. (3) Retina

Q3. (2) FALSE

Q4. (2) Ciliary muscles

Q5. (1) TRUE

Passage - 3 **5 Marks**



Answer Key 11.5

Marks - 25

Ryan cannot see objects beyond 1.2m distinctly. He now needs to go and purchase a corrective lens in order to be able to see these objects clearly. Use this information to answer the questions below:

Q1. (1) Myopia

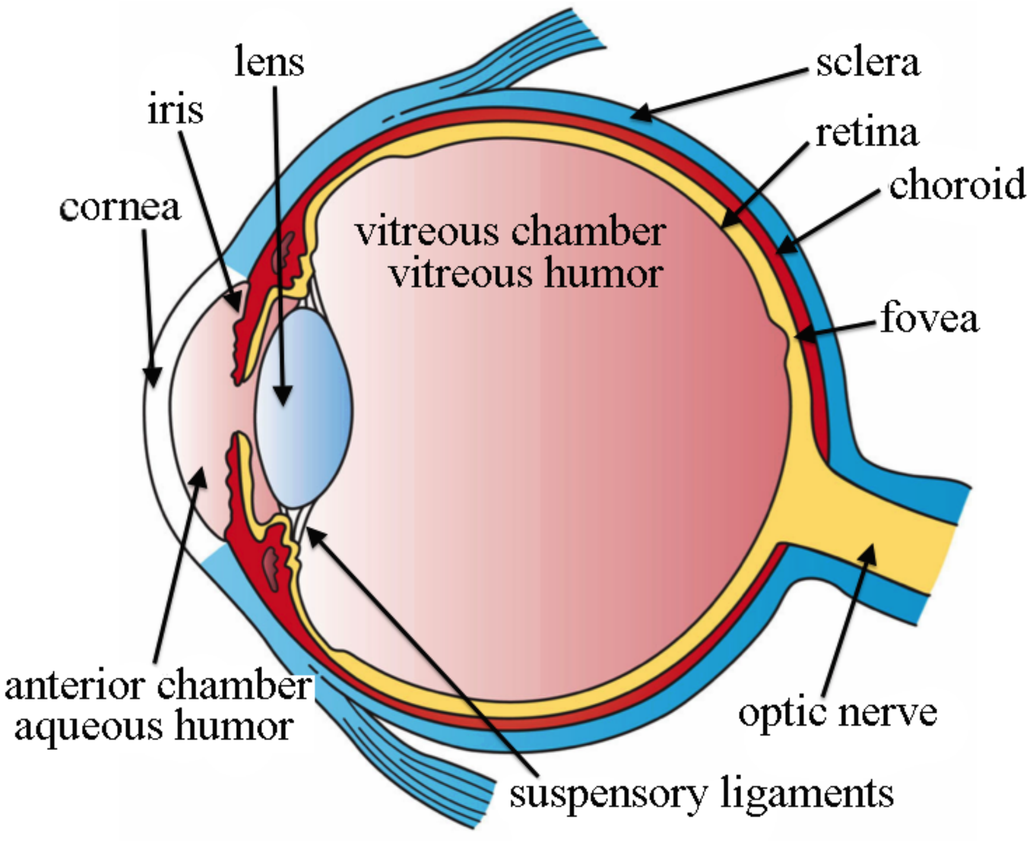
Q2. (1) Infinity

Q3. (1) Reciprocal of its focal length

Q4. (2) $\frac{1}{Power}$

Q5. (1) Dioptre

Passage - 4 **5 Marks**



A teacher is teaching the students certain concepts related to the human eye. See the above image and answer the below questions.

Q1. (1) Choroid

Answer Key 11.5

Marks - 25

Q2. (2) Retina

Q3. (3) Cornea

Q4. (4) Iris

Q5. (2) Ciliary muscles

Passage - 5

5 Marks

Sonu observes that the absolute refractive indices of two substance '1' and '2' are 2.0 and 1.5 respectively and the speed of light in medium '2' is 2×10^8 m/s. Observe the above figure and read the information. Answer the below questions:

Q1. (1) 3×10^8 m/s

Q2. (2) 1.5×10^8 m/s

Q3. (1) TRUE

Answer Key 11.5

Marks - 25

Q4. (1) Absolute refractive index

Q5. (2) Snell’s law

Answer Key 11.6

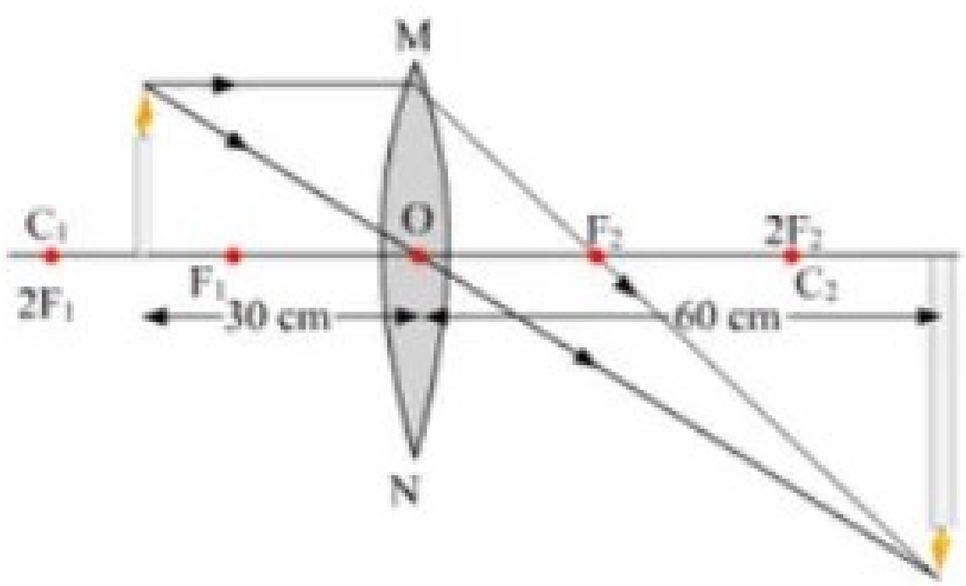
Marks - 25

Case study based questions

10th Science

Human Eye and Colourful World

Passage - 1 **5 Marks**



Sonu observes that the image of a candle flame placed at a distance of 30 cm from a spherical lens is formed on a screen placed on the other side of the lens at a distance of 60 cm from the optical centre of the lens. Few questions came to her mind. Give answers to the below questions:

Q1. (1) Convex lens

Q2. (2) 20 cm

Q3. (1) -6 cm

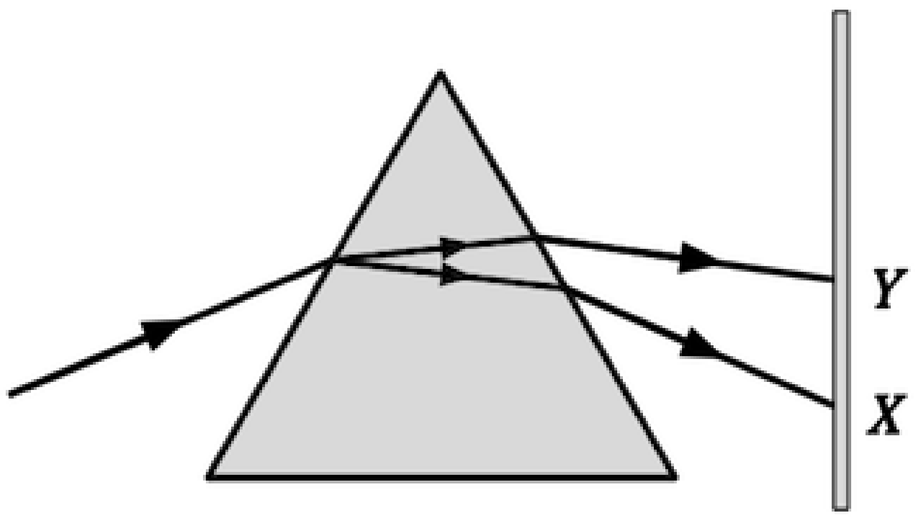
Q4. (2) $\frac{1}{P}$

Q5. (1) -2

Passage - 2 **5 Marks**

Answer Key 11.6

Marks - 25



A teacher is teaching the students certain concepts related to the dispersion of light. In the above figure, a narrow beam of white light is shown to pass through a triangular glass prism. After passing through the prism it produces a spectrum XY on a screen.See the above image and answer the below questions.

Q1. (1) Violet

Q2. (1) Due to difference in speed of light.

Q3. (2) Red

Q4. (1) Dispersion of light

Q5. (2) Red

Passage - 3 **5 Marks**

Answer Key 11.6

Marks - 25

Sonu consults the doctor for the need of a lens of power -4.5D for correction of his vision. Few questions came into his mind. Answer the below questions by using the above data.

Q1. (1) Myopia

Q2. (1) -22 cm

Q3. (2) Negative

Q4. (2) $\frac{1}{P}$

Q5. (1) Dioptre

Passage - 4 **5 Marks**

Answer Key 11.6

Marks - 25

Sania observes that the danger signals installed at the top of tall buildings are red in colour. These can be easily seen from a distance among all other colours.Few questions came into her mind. Answer the below questions by using the above data.

Q1. (2) Least scattered by smoke or fog

Q2. (1) TRUE

Q3. (1) YES

Q4. (1) TRUE

Q5. (2) Violet

Passage - 5 **5 Marks**

Answer Key 11.6

Marks - 25

Manu cannot see objects kept beyond 2 m distinctly. He consults the doctor to know about his defect. Few questions came into his mind. Answer the below questions by using the above data.

Q1. (3) -0.5 D

Q2. (1) Myopia

Q3. (2) Concave lens

Q4. (2) $\frac{1}{P}$

Q5. (1) Negative