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**Max Time : 1 hr** **Class = 10th Science Test Max Marks : 25**

**THE HUMAN EYE AND the COLOURFUL WORLD**

1. Multiple Choice Questions : [ 1 x 10 = 10 ]
2. The seven coloured lights of the spectrum can be recombined when two prisms are placed in

|  |  |
| --- | --- |
| a) horizontal position with respect to other | b) adjacent position with respect to other |
| c) inverted position with respect to other | d) vertical position with respect to other |

1. Which colour suffers least deviation on passing through a prism ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Red | b) Violet | c) Indigo | d) Blue |

1. The angle of deviation of a prism is the angle between

|  |  |
| --- | --- |
| a) incident ray and refracted ray | b) emergent ray and refracted ray |
| c) incident ray and emergent ray produced | d) none of the above |

1. Which colour has maximum speed in glass ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Violet | b) Red | c) Yellow | d) Green |

1. Coloured band of light obtained by dispersion of white light is called ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) mirage | b) spectrum | c) shadow | d) image |

1. Splitting of white light into seven colours on passing through a glass prism is called ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Reflection | b) Refraction | c) Scattering | d) Dispersion |

1. For normal vision, What is the minimum distance of object from eye?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 25 cm | b) 30 cm | c) 40 cm | d) Infinite |

1. Stars appear to twinkle because

|  |  |
| --- | --- |
| a) of atmospheric refraction | b) movement of air |
| c) both (a) and (b) | d) none of the above |

1. Red light is used as universal indicator for danger. It is because

a) red light has least wavelength and scatters most

b) red light has maximum wavelength and scatters most

c) red light has maximum wavelength and scatters least

d) it is matter of convention that there is not scientific principles

1. A normal eye can see objects clearly that are between :

|  |  |  |  |
| --- | --- | --- | --- |
| a) our eye & infinity | b) 25 cm & infinity | c) 50 cm & infinity | d) 100 cm & infinity |

1. Which defect of the eye can be corrected by using a cylindrical lens? [ 1 ]
2. What is colour blindness? [ 1 ]
3. A short sighted person cannot see clearly beyond 10 m. Calculate power of the lens required to correct his eye to normal vision. [ 2 ]
4. Draw a ray diagram to explain the term angle of deviation. [ 2 ]
5. A person needs a lens of power – 4.5 D for correction of her vision. [ 3 ]
6. What kind of defect in vision is she suffering from?
7. What is the focal length of the corrective lens?
8. What is the nature of the correction lens?
9. State the function of each of the following parts of the human eye : [ 3 ]
10. Cornea (b) Pupil (c) Retina
11. Make a diagram to show how hypermetropia is corrected. The near point of a hypermetropic eye is 1 m. What is the power of the lens required to correct this defect. Assume that the near point of the normal eye is 25 cm.

[ 3 ]