

CHAPTER – LIGHT

I. Short answer Type

- a) What do you mean by spectrum? (1)
- b) What do you mean by dispersion? What is the cause of dispersion? (2)
- c) Draw a diagram to show the splitting of white light into its constituent colours. (1)
- d) Draw another diagram to show how the colours of spectrum of white light can be combined to give the effect of white light. (1)
- e) Name the scientist who discovered (3)
 - (i) X-rays (ii) Visible light
 - (iii) Microwaves (iv) radio waves
 - (v) Infra-red waves (vi) Ultraviolet rays
- f) Express nanometer (nm) in terms of Angstrom (1)
- g) What is the velocity of electromagnetic wave? (1)

II. LONG ANSWER TYPE (5 marks * 2)

a)

Fig. 28 shows an object PQ placed on the principle axis of a lens L. The two foci of the lens are F_1 and F_2 . The image formed by the lens is erect, virtual and diminished.

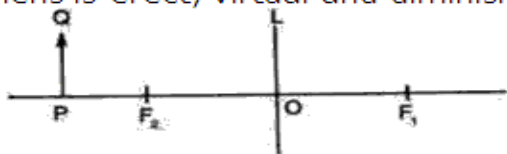


Fig. 28

- (i) Draw the outline of the lens L used and name it.
 - (ii) Draw a ray of light starting from Q and passing through O. show the same ray after refraction by the lens.
 - (iii) Draw another ray from Q which is incident parallel to the principle axis and show how it emerges after refraction from the lens.
 - (iv) Locate the final image formed.
- b)
- (i) Define the term refractive index of a medium. What do you understand by the statement 'the refractive index of glass is 1.5 for white light'? (2)
 - (ii) Define angle of deviation. Is dispersion same as deviation? (2)
 - (iii) Name the factors on which the deviation produced by a prism depends.(1)

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