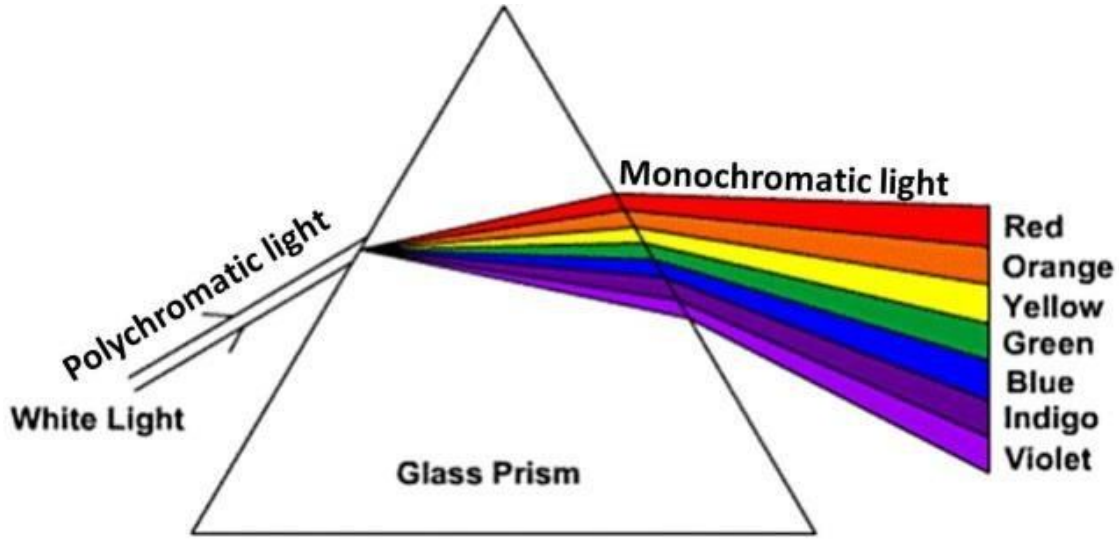
CASE STUDY QUESTION 21

Read the following and answer any four questions from (i) to (v)

Dispersion is the splitting up of white light into seven colors on passing through a transparent medium like a glass prism. When a white light beam is passed through a prism, a band of seven colors are formed is known as spectrum of white light as shown in below figure.

When white light consisting of seven colors falls on a transparent medium (glass prism) , each color in it is refracted (or deviated) by a different angle , with the result that seven colors are spread out to form a spectrum



(i) A beam of white light falls on a glass prism. The colour of light which undergoes the least bending on passing through the glass prism is :

(a) violet (b) red (c) green (d) blue

Ans: (b) red

(ii)The colour of white light which suffers the maximum bending (or maximum refraction) on passing through a glass prism is :

(a) yellow (b) orange (c) red (d) violet

Ans: (d) violet

(iii) Which of the following colour of white light is least deviated by the prism ?

(a) green (b) violet (c) indigo (d) yellow

Ans: (d) yellow

(iv) The colour of white light which is deviated the maximum on passing through the glass prism is :

(a) blue (b) indigo (c) red (d) orange

Ans: (b) indigo

(v) The splitting up of white light into seven colours on passing through a glass prism is called :

(a) refraction (b) deflection (c) dispersion (d) scattering

Ans: (c) dispersion