6. Spectrum: Previous year questions 2000-2017

2017

1. (i) Name the radiations which are absorbed by greenhouse gases in the earth's atmosphere
   (ii) a radiation X is focused by a particular device on the bulb of a thermometer and mercury in the thermometer shows a rapid increase. Name the radiation 'X'

2016

1. What do you understand by the term 'scattering of light'? Which colour of white light is scattered the least and why? [4 marks]

2015

1. (i) Why does sun appear red at sunrise
   (ii) Name the subjective property of light related to its wavelength [3 marks]

2014

1. (i) Name a prsim required for obtaining a spectrum of UV light
   (ii) Name the radiations which can be detected by thermopile [2 marks]
2. Why is the red color used as a sign of danger[2 marks]
3. A type of electromagnetic wave has wavelength 50 Å
   a. Name the wave
   b. What is the speed of the wave in vacuum
   c. State one use of this type of wave [3 marks]

2013

1. Name the radiations
   a. That are used for photography at night
   b. Used for detection of fracture in bones
   c. Whose wavelength range is from 10 nm to 400 nm [3 marks]

2012

1. (i) What is meant by dispersion of light
   (ii) In the atmosphere, which color of light scattered the least [2 marks]

2011

1. Which characteristic property of light is responsible for the blue color of the sky [1 mark]
2. (i) Suggest one way in each case by which we can detect the presence of
   a. Infrared radiations
   b. UV radiations
   (ii) Give one use of infrared radiations [3 marks]

2010

1. Name the subjective property of light related to its wavelength [1 mark]

2. Two parallel rays of red and violet light travelling through air, meet the air-glass boundary as shown in the given figure
    a. Will their paths inside the glass be parallel? Give a reason for your answer
    b. Compare the speeds of the two rays inside the glass [3 marks]

2009

1. (i) Why is white light is considered to be polychromatic in nature
(ii) Give the range of the wavelength of those electromagnetic waves which are visible to us [2 marks]

2007

1. Why are IR radiations preferred over ordinary visible light for taking photographs in fog [2 marks]
2. A particular type of high energy invisible electromagnetic rays help us to study the structure of crystals. Name these rays and give another important use of these rays [2 marks]

2006

1. Give one use of each of the electromagnetic radiations given below
    a. Microwave
    b. UV radiation
    c. IR radiation [3 marks]

2005

1. Explain briefly what causes the twinkling of stars at night [1 mark]
2. Name any two electromagnetic waves, which have a frequency higher than that of violet light. State one use of each [1 mark]
3. (i) A glass slab is placed over a page on which the word VIBGYOR is printed with each letter in its corresponding color
    a. Will the image of all the letters be in the same place
    b. If not, state which letter will be raised to the maximum. Give a reason for your answer
(ii) What will be the color of an object which appears green in white light and black in red light [3 marks]

2003

1. (i) If a monochromatic beam of light undergo minimum deviation through a triangular prism, how does the beam pass through the prism with respect to its base
(ii) If white light is used in the same way as in (i) above, what change is expected in the above beam [3 marks]

2002

1. Name any four regions of electromagnetic spectrum (other than visible light) in increasing order of their wavelength [4 marks]

2001

6. Spectrum: Previous year questions 2000-2017

1. (i) Explain why in daylight an object appears red when seen through a red glass and black when seen through a blue glass
   (ii) Name the extreme colors in pure spectrum of light [4 marks]

2000

1. Fill in the blanks: a piece of red cloth appears red in white light, because it ..... Blue and green colors ..... on red color. [1 mark]