

- 20** Wavelengths of different radiations are given below.  
 $\lambda(A) = 300 \text{ nm}$ ,  $\lambda(B) = 300 \mu\text{m}$ ,  $\lambda(C) = 3 \text{ nm}$ ,  
 $\lambda(D) = 30 \text{ \AA}$   
Arrange these radiations in the increasing order of their energies.
- 21** Calculate energy of one mole of photons of radiation whose frequency is  $5 \times 10^{14} \text{ Hz}$ . **NCERT Textbook**
- 22** A 100 watt bulb emits monochromatic light of wavelength 400 nm. Calculate the number of photons emitted per second by the bulb.
- 23** Yellow light emitted from a sodium lamp has a wavelength ( $\lambda$ ) of 580 nm. Calculate the frequency ( $\nu$ ) and wave number ( $\bar{\nu}$ ) of the yellow light.
- 24** The Vividh Bharati Station of All India Radio, Delhi, Broadcasts on a frequency of 1368 kHz (kilohertz). Calculate the wavelength of the electromagnetic radiation emitted by transmitter. Which part of the electromagnetic spectrum does it belong to?
- 25** What is the number of photons of light with a wavelength of 4000 pm that provide 1 J of energy? **NCERT Textbook**