Grade 8

Physics

2nd Term Notes

Chapter -14

PROPERTIES OF WAVES

Answers of end of chapter questions

1. **A wave transfers energy from place to place without transferring matter.**

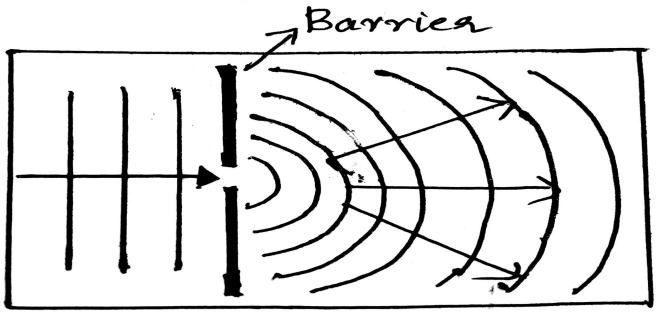
2.

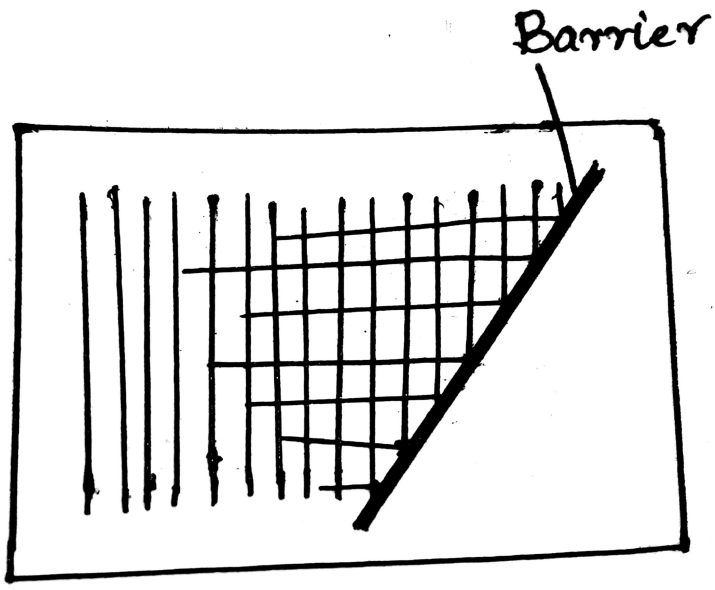
Transverse waves	**Describes a wave that varies from side to side at right angles to the direction of travel.**
Longitudinal waves	**Describes a wave that varies back and forth along the direction of travel.**

3.

Symbol	Quantity	Unit
v	**Velocity / speed of wave**	**mls**
f	**Frequency of wave**	**Hz**
λ	**Wavelength**	**m**

4.

5. 



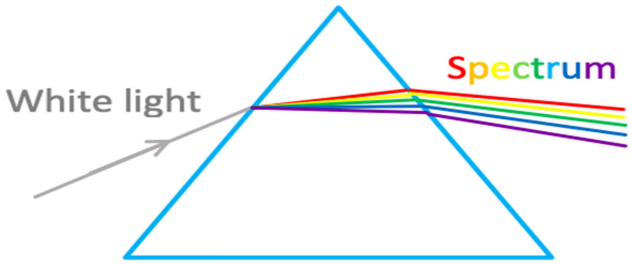
6. **a) The waves will get reflected**
   b)They will get refracted
   c) The waves will spread out .Diffraction occurs
   d)Diffraction will be less.

CHAPTER -15

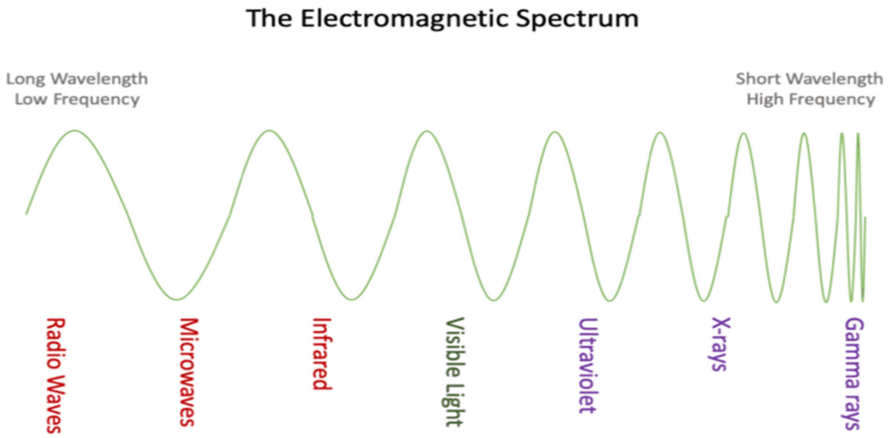
SPECTRA

Dispersion

When light enters a denser medium, such as glass, it slows down (refracts), which causes it to bend. Different colors, however, slow down by different amounts, which causes them to bend by different amounts. This effect is known as dispersion and can be used to separate white light into its individual colors.



- **Visible light is just one small part of a much bigger spectrum: the electromagnetic spectrum.**
- **The different parts of the spectrum have different names (and some different properties).**
- **These parts are shown in order below, going from the longest wavelength (and lowest frequency) to the shortest wavelength (and highest frequency).**



All electromagnetic waves share several properties:

- **They are all transverse.**
- **They can all travel through a vacuum**
- **They all travel at the same speed in a vacuum $3 \times 10^{8\ m/s}$**