

INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet for the Academic Year 2023-24

CLASS:XII SUBJECT:PHYSICS DATE:9/6/23

LESSON :_ELECTROMAGNETIC WAVES

1. What is the role of ozone in the atmosphere?
2. What is the nature of waves used in radar?
3. Write the application of Infra-red radiations?
4. Which constituent radiation of the electromagnetic spectrum is used?
 - (1) To photograph internal parts of human body.
 - (2) For air aircraft navigation
5. Write the expression for velocity of electromagnetic waves in terms of permittivity and permeability of the medium?
6. Write any four characteristics of electromagnetic waves.
7. Give any two uses of (i) radio waves (ii) microwaves
8. A plane e.m. wave of frequency 25 Hz travels in free space along x-axis. At an extent the electric field $E=6.3\text{V/m}$. Calculate B at this point.
9. In a plane e.m. wave the electric field oscillates with a frequency of $2 \times 10^{10} \text{ s}^{-1}$ and amplitude of 40V/m . (i) What is the wavelength of the wave?
10. Draw a diagram showing the propagation of e.m. wave along x-direction, indicating clearly the directions of the oscillating electric and magnetic fields associated with it.