

ANALOG NCERT 12.8.11

EE23BTECH11046 - Poluri Hemanth*

Question: Suppose that the electric field part of an electromagnetic wave in vacuum given as

$$\mathbf{E} = \{(3.1 \text{ N/C}) \cos[(1.8 \text{ rad/m})y + (5.4 \times 10^6 \text{ rad/s})t]\} \hat{i}$$

- (a) What is the direction of propagation ?
- (b) What is the wavelength ?
- (c) What is the frequency ?
- (d) What is the amplitude of the magnetic field part of the wave?
- (e) Write an expression for the magnetic field part of the wave.