

# Propagation of Electromagnetic wave part1 Lecture-18

TDC PART -1

PAPER 1(GROUP B)

Chapter -6

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# Defination

- An electromagnetic wave is a type of wave (a wave carries energy through a medium- though electromagnetic waves seemingly need no medium as they propagate through vacuums) that moves at speed  $c$ , or the speed of light (the speed of light  $\approx 300,000$  km/s in free space).



# Propagation of an Electromagnetic Wave

- Electromagnetic waves are waves which can travel through the vacuum of outer space.
- Mechanical waves, unlike electromagnetic waves, require the presence of a material medium in order to transport their energy from one location to another.

- Sound waves are examples of mechanical waves while light waves are examples of electromagnetic waves.



# Mechanical waves and Electromagnetic waves

- Mechanical waves require the presence of a material medium in order to transport their energy from one location to another
- Electromagnetic waves are waves which can travel through the vacuum of outer space.



