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Topic - Different Modes Of Heat Transfer

Did you know that heat could be transferred between two bodies at different temperatures? we will look into the thermal properties of matter and will discuss [Different Modes of Heat Transfer](#).

Heat is a form of energy which transfers between bodies which are kept under thermal interactions. When a temperature difference occurs between two bodies or a body with its surroundings, heat transfer occurs.

What is Heat Transfer:

Heat transfer is a discipline of thermal engineering that concerns the generation, use, conversion, and exchange of thermal energy between physical systems. Heat transfer is classified into various mechanisms, such as thermal conduction, thermal convection, thermal radiation, and transfer of energy by phase changes.

Modes Of Heat Transfer

Heat transfer occurs in three modes. Three modes of heat transfer are described below.

- Conduction
- Convection
- Radiation

Conduction:

In Conduction, heat transfer takes place due to a temperature difference in a body without mixing of mass. The rate of heat transfer through conduction is governed by Fourier's law of heat conduction.

Convection:

This mode of heat transfer particularly occurs in fluids in motion. That is in both liquids and gases that are in motion. This mode of heat transfer occurs due to the transfer of energy through the bulk mass.

Radiation

Radiation is a mode of heat transfer which takes place through a vacuum and hence, does not need a physical medium. Radiation takes place either through a vacuum or through a transparent medium. In radiative mode, heat transfer takes place through photons present in the electromagnetic waves.