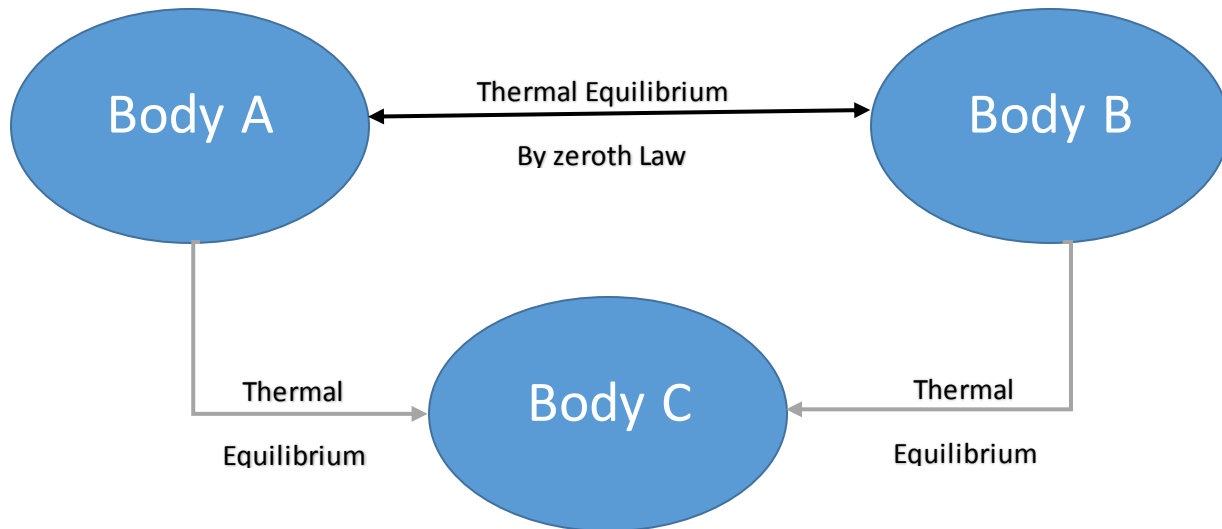


# Three laws of thermodynamics

## ➤ *Zeroth Law*

If two bodies are in thermal equilibrium with a third body, then they are in thermal equilibrium with each other.



## ➤ *First Law*

Energy can neither be created, nor be destroyed. It can only change its forms.

For a system,

Net energy transferred to/from system as heat and work = Net increase/decrease in total energy of system

$$Q - W = \Delta E$$

## ➤ *Second Law*

Heat itself cannot flow from a colder body to a hotter body.