

# **Heat Transfer**

## **Assignment 1**

### **Basics of Heat transfer**

- 1) Define Heat.
- 2) Define Thermodynamics.
- 3) Define Heat Transfer.
- 4) What is difference between thermodynamics & heat transfer?
- 5) Give the basic laws governing heat transfer.
- 6) What is the driving force for heat transfer.
- 7) Discuss all modes of heat transfer with suitable examples.
- 8) Define steady state of heat transfer.
- 9) Define unsteady state of heat transfer.
- 10) Define transient state of heat transfer.
- 11) What are the types of convection? Explain all with examples.
- 12) Define Fourier Law of conduction.
- 13) Define thermal gradient.
- 14) Define heat flux.
- 15) Define Thermal Conductivity. Also give its unit. How it differs with temperature?
- 16) Define thermal conduction Resistance.
- 17) Define Newton Law of cooling.
- 18) Give the unit of heat convection coefficient.
- 19) Define thermal convection Resistance.
- 20) Define Stefan Boltzmann Law.
- 21) Give the unit of heat radiation coefficient.
- 22) Define thermal radiation Resistance.
- 23) Define Wien Law.
- 24) Define Kirchhoff Law.
- 25) Explain the electrical analogy of heat conduction, convection & radiation.