

Assignment: 1 FUNDAMENTAL

1. Derive an expression for three dimensional time dependent heat conduction with internal heat generation and constant thermal conductivity in Cartesian coordinate system. Reduce it as i. Poisson equation ii. Fourier equation and iii. Laplace equation.
2. Derive general heat conduction equation in cylindrical coordinate system.
3. Write a short note on thermal conductivity. What is effect of temperature on it?
4. Differentiate three modes of heat transfer?

