Module 1

Chapter 1 : Modes of Heat Transfer and Heat Conduction 1-1 to 1-68

Syllabus : Modes of Heat Transfer : Mechanism of conduction, Convection and radiation heat transfer and it's Governing laws. Generalized heat conduction equation in rectangular, cylindrical and spherical coordinates (only equations for cylindrical and spherical coordinates, no derivation). Steady state heat conduction through plane wall, composite wall, cylinder, composite cylinder, sphere and composite sphere. Thermal contact resistance. Critical radius of insulation in cylinder and sphere.

Syllabus : Introduction to I.C. Engine and its Classification. Working of Four stroke and Two-stroke engines, Valve Timing Diagram. Fuel air cycle, Actual Cycle.

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