Sr. No.	Title	COs
1	**Introduction:** Prime movers and its types, Concept of Force, Pressure, Energy, Work, Power, System, Heat, Temperature, Specific heat capacity, Change of state, Path, Process, Cycle, Internal energy, Enthalpy, Statements of Zeroth law and First law	CO1
2	**Properties of gases:** Gas laws, Boyle's law, Charle's law, Combined gas law, Gas constant, Relation between cp and cv, Various non-flow processes like constant volume process, constant pressure process, Isothermal process, Adiabatic process, Polytropic process	CO2
3	**Heat Engines:** Heat engine cycle and Heat engine, working substances, Classification of heat engines, Description and thermal efficiency of Carnot; Rankine; Otto cycle and Diesel cycles	CO3
4	**Steam Boilers:** Introduction, Classification, Cochran, Lancashire and Babcock and Wilcox boiler, Functioning of different mountings and accessories	CO4
5	**Internal Combustion Engines:** Introduction, Classification, Engine details, four-stroke/ two-stroke cycle Petrol/Diesel engines, Indicated power, Brake Power, Efficiencies	CO3
6	**Refrigeration & Air Conditioning:** Refrigerant, Vapor compression refrigeration system, Vapor absorption refrigeration system, Domestic Refrigerator, Window and split air conditioners	CO4
7	**Couplings, Clutches and Brakes:** Construction and applications of Couplings (Box; Flange; Pin type flexible; Universal and Oldham), Clutches (Disc and Centrifugal), and Brakes (Block; Shoe; Band and Disc)	CO5