SUBJECT NO-ME40701, SUBJECT NAME- APPLIED THERMO-FLUIDS II

LTP- 3-2-0,CRD- 5

SYLLABUS :-

Applied Thermo-Fluids â 2Prerequisite âHeat TransferAnalysis of steam cycles, optimization of reheat pressure and degree of regeneration, coupled cycles and combined plants, process heat and power. Fuels and their properties, stoichiometric and actual air requirements, flue gas analysis, boiler energy balance, draft system. Different types of furnaces for burning coal, fuel oil and gas. Circulation theory, down-comers and risers, economizers and super-heaters, air pre-heater, drum and its internals. Different types of boilers, boiler mountings, feed water treatment, boiler loading and manner of operation. Steam turbines; convergent and convergent-divergent nozzles - theory and design. Impulse and reaction turbines, compounding of turbines, optimum velocity ratio, reheat factor and condition line, parallel exhaust, losses in steam turbines, steam turbine governing. Theory and design of condensers, air ejector and cooling tower.