2.18 30272 POWER PLANT ENGINEERING

UNIT-1 ENERGY RESOURCE AND THEIR AVAILABILITY:
Types of power plants, selection of the plants, electrical safety

UNIT-2 SCHEMATIC ARRANGEMENTS OF HYDROELECTRIC POWER STATIONS;
Constructions and operations of different components of Hydro-Electric power plants; comparison with other types of power plants

UNIT-3 STEAM FUNDAMENTALS;
Schematic arrangements; choice of site; efficiency of steam power plants; equipment's boilers & steam generators; boilers auxiliaries

UNIT-4 CONSTANT PRESSURE GAS TURBINE POWER PLANTS;
Arrangements of combined plants; Steam & gas turbine power plants; Re powering system; with gas production from coal, organic fluids; parameters affecting thermodynamic efficiency of combined cycles

UNIT-5 PRINCIPLE OF NUCLEAR ENERGY;
Basic nuclear reaction; Nuclear reaction fission theory; Steam supply; Operation and maintenance; Reactor safety; Cooling towers; Water treatment; Advantages and limitations; Waste disposal

UNIT-6 LOAD CURVE;
Different terms and definitions; Cost of electrical energy; Tariffs methods of electrical engineering; Performance & operating characteristics of power plants: Incremental rate theory

Reference Book:
1. Power Plant Engineering by Samsher Gautam
2. Power Plant Engineering by Alek Gupta