

Week	Topics
1	INTRODUCTION TO MACHINERY PRINCIPLE: System of units, Linear motion, Rotation Motion, Angular Position, Torque, Newton's Law & Power relation ship, Magnetism, Magnetic flux, magnetic flux density, classification of magnets, magnetic field intensity, eddy current, reluctance, Leakage flux, Fraday's Law induced voltage from a time changing magnetic field, Production of induced voltage on a wire, induced voltage on a conductor moving in a magnetic filed, Fleming's right hand rule, Lenz's Law.
2	Continued
3	Continued
4	Continued
5	MAGNETIC CIRCUIT & DC MACHINERY FUNDAMENTALS: Magnetic Units and relationships, composite magnetic circuit, magnetic leakage and fringing, hysteretic, minimum volume of magnet, load line and magnet, long solenoid, magnetic pull, force between current –carrying conductors. Simple Rotating Loop between curved pole faces, The Internal generated voltage & induced voltage equation of Real Machine the construction of DC Machines, Power Flow and Losses in DC Machines.
6	Continued
7	Continued
8	Continued
9	DC GENERATORS: Terminal Characteristics of DC Generators, the Equivalent Circuit of a DC Generator, The Magnetization Curve of a Generator, The Separately excited Generator, The Shunt Generator, Terminal characteristics and applications of DC Shunt Generators , The Series DC Generator, The Compound DC Generators, Application of Shunt.
10	Continued
11	Continued
12	Continued
13	DC MOTOR COMPOUND DC GENERATORS: Definition and operation, the equivalent circuit of a DC Motor, Separately excited and shunt DC Motors, Speed Regulation, Motor starting requirements, separately excited and self excited shunt DC motors, Terminal characteristics of a DC shunt motor, Armature Terminal voltage-speed control method, Rheostatic control-speed control method, the series DC Motor, The Compound DC Motor (Introduction & Characteristics), Losses in DC Motors, Applications of the various types of motors, DC Motor efficiency calculations.
14	Continued
15	Continued
16	Continued