LESSON PLAN-2024
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- ETC	Semester-4TH	Name of teaching faculty- DEEPAPRIYA ROUT
SUBJECT- EM	No of days/ per week class alloted-5	SEM From date- 16/01/2024 No of weeks-
Week	Class day	Theory Topics
03 WEEK		**D.C GENERATOR**
4TH	16/01/2024	Operating principle of generator
	17/01/2024	Constructional features of DC machine: Yoke, Pole & field winding, Armature, Commutator.
	19/01/2024	Armature winding, back pitch, Front pitch, Resultant pitch and commutator- pitch.
	20/01/2024	Simple Lap and wave winding, Dummy coils.
	22/01/2024	Different types of D.C. machines (Shunt, Series and Compound)
	23/01/2024	Derivation of EMF equation of DC generators. (Solve problems)
	24/01/2024	Losses and efficiency of DC generator. Condition for maximum efficiency and numerical problems.
	27/01/2024	Armature reaction in D.C. machine
	29/01/2024	Commutation and methods of improving commutation.
1ST	30/01/2024	Role of inter poles and compensating winding in commutation.
	31/01/2024	Characteristics of D.C. Generators
	2/02/2024	Application of different types of D.C. Generators
	3/02/2024	Concept of critical resistance and critical speed of DC shunt generator
2ND	5/02/2024	Conditions of Build-up of emf of DC generator
	6/02/2024	Parallel operation of D.C. Generators.
	7/02/2024	Uses of D.C generators.
	8/02/2024	**D. C. MOTORS**
	9/02/2024	Basic working principle of DC motor
3RD	10/02/2024	Significance of back emf in D.C. Motor.
	12/02/2024	Voltage equation of D.C. Motor and condition for maximum power output(simple problems)
	13/02/2024	Derive torque equation (solve problems)
	15/02/2024	Characteristics of shunt, series and compound motors and their application.
	16/02/2024	Starting method of shunt, series and compound motors.
	17/02/2024	Speed control of D.C shunt motors by Flux control method. Armature voltage Control method. Solve problems

	19/02/2024	Speed control of D.C. series motors by Field Flux control method, Tapped field method and series-parallel method
	20/02/2024	Determination of efficiency of D.C Machine by Brake test method(solve numerical problems)
	21/02/2024	Determination of efficiency of D.C. Machine by Swinburne's Test method(solve numerical problems)
	23/02/2024	Losses, efficiency and power stages of D.C motor(solve numerical problems)
	24/02/2024	Uses of D.C motors
	26/02/2024	**SINGLE PHASE TRANSFORMER**
5TH	27/02/2024	Working principle of transformer
	28/02/2024	Constructional feature of Transformer
	1/03/2024	Arrangement of core & winding in different types of transformer
	2/03/2024	Brief ideas about transformer accessories such as conservator, tank, breather, and explosion vent etc.
1ST	4/03/2024	Explain types of cooling methods
	5/03/2024	State the procedures for Care and maintenance
	6/03/2024	EMF equation of transformer
	9/03/2024	Ideal transformer voltage transformation ratio
	11/03/2024	Operation of Transformer at no load, on load with phasor diagrams.
2ND	12/03/2024	Equivalent Resistance, Leakage Reactance and Impedance of transformer.
	13/03/2024	To draw phasor diagram of transformer on load, with winding Resistance and Magnetic leakage with using upf, leading pf and lagging pf load.
	15/03/2024	To explain Equivalent circuit and solve numerical problems
	16/03/2024	Approximate & exact voltage drop calculation of a Transformer.
	18/03/2024	Regulation of transformer.
3RD	19/03/2024	Different types of losses in a Transformer. Explain Open circuit and Short Circuit test.(Solve numerical problems)
	20/03/2024	Explain Efficiency, efficiency at different loads and power factors, condition for maximum efficiency (solve problems)
	22/03/2024	Explain All Day Efficiency (solve problems)
	23/03/2024	Determination of load corresponding to Maximum efficiency
	25/03/2024	Parallel operation of single phase transformer
	27/03/2024	**AUTO TRANSFORMER**
	29/03/2024	Constructional features of Auto transformer.
4TH	30/03/2024	Working principle of single phase Auto Transformer.
	1/04/2024	Comparison of Auto transformer with an two winding transformer (saving of Copper).