LESSON PLAN-2023(WINTER 2023)
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- ELECTRICAL	Semester-5TH	Name of teaching faculty- TAPAN KU. SWAIN
SUBJECT- ENERGY CONVERSION -II	No of days/ per week class alloted-5	SEM From date- 01/08/2023 No of weeks-17
Week	Class day	Theory Topics
1ST	01.08.2023	Explain and derive production of rotating magnetic field.
	02.08.2023	Explain principles of operation.
	03.08.2023	Explain constructional feature-squirrel cage and slip rings induction motors.
	04.08.2023	Explain constructional feature-squirrel cage and slip rings induction motors.
2ND	07.08.2023	Explain & derive slip and relationship with rotor copper losses.
	08.08.2023	Derive Torque during starting and running.
	09.08.2023	Derive for Rotor copper losses, rotor output and gross Torque.
	10.08.2023	-DO-
	11.08.2023	Derive Torque-Speed and load current speed characteristics.
	12.08.2023	Explain and state Methods of starting, different types of starter.
3RD	14.08.2023	Explain speed control by pole changing, Rotor Rheostatic control, voltage control
	16.08.2023	Describe motor enclosures.
	17.08.2023	Explain Induction Generator's and state its applications.
	18.08.2023	CLASS TEST
	19.08.2023	State types of alternator
4TH	21.08.2023	Describe constructional details of non salient and salient pole rotor.
	22.08.2023	Describe constructional details of stator.
	23.08.2023	Explain armature winding, short pitch winding, pitch factor, distribution factor
	24.08.2023	Derive E.M.F equation
	25.08.2023	Explain Armature reaction.
	26.08.2023	-DO-
5TH	28.08.2023	Explain Alternator on load. Solved Problems
	29.08.2023	-DO-
	30.08.2023	Draw the phasor diagram of loaded alternator. (Solve problems)
	31.08.2023	Draw the characteristic of Alternator.

	01.09.2023	State and explain open circuit and short circuit tests (Solve problems)
	02.09.2023	Determination of regulation of Alternator by direct loading and synchronous impedance method.
1ST	04.09.2023	Explain parallel operation and load division using synchro scope & dark and bright lamp method
	05.09.2023	CLASS TEST
	06.09.2023	Explain construction of Synchronous motor
	07.09.2023	Principles of operation, concept of load angle
	08.09.2023	Derive torque, power developed
	09.09.2023	Effect of varying load with constant excitation.
2ND	11.09.2023	Explain effect of varying excitation with constant load.
	12.09.2023	DO
	13.09.2023	Power angle characteristics of cylindrical rotor motor.
	14.09.2023	Explain effect of excitation on Armature current and power factor.
	15.09.2023	Derive torque, power developed
	16.09.2023	Hunting in Synchronous Motor, Function of Damper Bars
3RD	18.09.2023	Explain effect of excitation on Armature current and power factor.
	20.09.2023	Explain Hunting & function of Damper Bars.
	21.09.2023	Describe method of starting of Synchronous motor.
	22.09.2023	State application of synchronous motor.
	23.09.2023	DO
4TH	25.09.2023	CLASS TEST
	26.09.2023	Explain Single phase Rotating – field theory of 1-phase induction motor
	27.09.2023	Explain Ferrair's principle, net torque
	28.09.2023	Explain capacitor motor with principle.
	30.09.2023	Explain split phase motor with principle.
1ST	03.10.2023	Explain shaded pole motors with principle.
		Seed torque characteristics
	04.10.2023	class test
	05.10.2023	Explain single phase series motor & Universal motors with principle
	06.10.2023	do
	07.10.2023	do
2ND	09.10.2023	do
	10.10.2023	INTERNAL
	11.10.2023	INTERNAL
	12.10.2023	INTERNAL
	13.10.2023	INTERNAL
	14.10.2023	INTERNAL

3RD	16.10.2023	Explain Repulsion Motors with principles
	17.10.2023	DO
	18.10.2023	class test
	19.10.2023	Principle of Stepper motor.
	20.10.2023	Classification of Stepper motor. Principle of variable reluctant stepper motor.
	30.10.2023	DO
	31.10.2023	Principle of Permanent magnet stepper motor.
1ST	01.11.2023	Principle of hybrid stepper motor. Applications of Stepper motor.
	02.11.2023	DO
	03.11.2023	class test
	04.11.2023	Explain Grouping of winding, Advantages of transformer
2ND	06.11.2023	Explain parallel operation of the three phase transformers.
	07.11.2023	Explain tap changer (On/Off load tap changing)
	08.11.2023	State maintenance of Transformers
	09.11.2023	Class test
	10.11.2023	Revision of chapter 1
	11.11.2023	Do
3RD	13.11.2023	Previous year question discussion
	14.11.2023	Revision of chapter 2
	15.11.2023	Do
	16.11.2023	Previous year question discussion
	17.11.2023	Revision of chapter 3
	18.11.2023	Do
4TH	20.11.2023	Previous year question discussion
	21.11.2023	Revision of chapter 4
	22.11.2023	Do
	23.11.2023	Previous year question discussion
	24.11.2023	2 & 5 mark question discussion
	25.11.2023	Do
5TH	27.11.2023	Do
	28.11.2023	Do
	29.11.2023	Do
	30.11.2023	Do

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