

LESSON PLAN-2020-21
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline-ELECTRICAL	Semester-5TH	Name of teaching faculty- Kailash chandra Senapati
SUBJECT-ENERGY CONVERSION -II	No of days/ per week class allotted-5	SEM From date- 01/09/20 No of weeks-19
Week	Class day	Theory Topics
1st	01.09.20	Explain and derive production of rotating magnetic field.
	02.09.20	Explain principles of operation.
2nd	04.09.20	Explain constructional feature-squirrel cage and slip rings induction motors.
	05.09.20	Explain constructional feature-squirrel cage and slip rings induction motors.
	07.09.20	Explain & derive slip and relationship with rotor copper losses.
	09.09.20	Derive Torque during starting and running.
	11.09.20	Derive for Rotor copper losses, rotor output and gross Torque.
	12.09.20	-DO-
3rd	14.09.20	Derive Torque-Speed and load current speed characteristics.
	15.09.20	Explain and state Methods of starting, different types of starter.
	18.09.20	Explain speed control by pole changing, Rotor Rheostatic control, voltage control
	19.09.20	Describe motor enclosures.
	21.09.20	Explain Induction Generator's and state its applications.
	22.09.20	Revision
	23.09.20	State types of alternator
1st	24.09.20	Describe constructional details of non salient and salient pole rotor.
	25.09.20	Describe constructional details of stator.
2nd	28.09.20	Explain armature winding, short pitch winding, pitch factor, distribution factor
	29.09.20	Derive E.M.F equation
	30.09.20	Explain Armature reaction.
3rd	1.10.20	-DO-
	2.10.20	Explain Alternator on load. Solved Problems
	05.10.20	-DO-

	6.10.20	Draw the phasor diagram of loaded alternator. (Solve problems)
	08.10.20	Draw the characteristic of Alternator.
4th	9.10.20	State and explain open circuit and short circuit tests (Solve problems)
	12.10.20	Determination of regulation of Alternator by direct loading and synchronous impedance method.
	13.10.20	Explain parallel operation and load division using synchro scope & dark and bright lamp method
5th	15.10.20	IST INTERNAL
	16.10.20	IST INTERNAL
	19.10.20	IST INTERNAL
1st	20.10.20	Explain construction
	21.10.20	Explain principles of operation, phasor diagram
	22.10.20	Explain effect of varying load with constant excitation
	23.10.20	DO
2nd	27.10.20	Explain effect of varying excitation with constant load.
	28.10.20	DO
	29.10.20	Derive torque, power developed
3rd	30.10.20	Explain power angle characteristics of cylindrical rotor motor.
	2.11.20	Explain effect of excitation on Armature current and power factor.
	3.11.20	Explain Hunting & function of Damper Bars.
	4.11.20	Describe method of starting of Synchronous motor.
4th	5.11.20	State application of synchronous motor.
	6.11.20	DO
	9.11.20	Explain Single phase Rotating – field theory of 1-phase induction motor
	10.11.20	Explain Ferrair's principle, net torque
	11.11.20	Explain capacitor motor with principle.
1st	12.11.20	Explain split phase motor with principle.
	13.11.20	Explain shaded pole motors with principle.
	16.11.20	Explain their speed torque characteristics performance characteristics, applications.
2nd	17.11.20	class test
	18.11.20	Explain single phase series motor & Universal motors with principle
	19.11.20	do
	20.11.20	do

3rd	23.11.20	do
	24.11.20	Explain Repulsion Motors with principles
	25.11.20	DO
	26.11.20	class test
4th	27.11.20	Principle of Stepper motor.
	30.11.20	Classification of Stepper motor. Principle of variable reluctant stepper motor.
	1.12.20	DO
	2.12.20	Principle of Permanent magnet stepper motor.
	3.12.20	Principle of hybrid stepper motor. Applications of Stepper motor.
5th	4.12.20	DO
	7.12.20	class test
	8.12.20	Explain Grouping of winding, Advantages.
	9.12.20	Explain Grouping of winding, Advantages
	10.12.20	Explain parallel operation of the three phase transformers.
	11.12.20	Explain tap changer (On/Off load tap changing)
1ST	13.12.20	State maintenance of Transformers
HOD		PRINCIPAL