

LESSON PLAN-2020-2021
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- ELECTRICAL	Semester-6TH	Name of teaching faculty-Sonali Susmita Tripathy
SUBJECT- RES	No of days/ per week class alloted-5	SEM From date-22/4/21 No of weeks-
Week	Class day	Theory Topics
		Introduction to Renewable energy
1st	22.04.21	Environmental consequences of fossil fuel use.
	23.04.21	Importance of renewable sources of energy.
2nd	26.04.21	Sustainable Design and development.
	27.04.21	Types of RE sources.
	28.04.21	Limitations of RE sources.
	29.04.21	Present Indian and international energy scenario of conventional and RE sources
	30.04.21	Assignments and doubt clearing Discussion about chapter-1
		Solar Energy
1st	03.05.21	Solar photovoltaic system-Operating principle.
	04.05.21	Photovoltaic cell concepts
	05.05.21	Cell, module, array, Series and parallel connections
	06.05.21	do
	07.05.21	MPPT
2nd	10.05.21	Classification of energy Sources
	11.05.21	Extra-terrestrial and terrestrial Radiation.
	12.05.21	Azimuth angle, Zenith angle, Hour angle
	13.05.21	Irradiance, Solar constant
	14.05.21	Solar collectors, Types and performance characteristics
3rd	17.05.21	Solar collectors, Types and performance characteristics
	18.05.21	Do
	19.05.21	Photovoltaic - battery charger, domestic lighting, street lighting
	20.05.21	water pumping, solar cooker, Solar Pond.
	21.05.21	Assignments and doubt clearing Discussion about chapter-2
		Wind Energy
4th	24.05.21	Introduction to Wind energy
	25.05.21	Wind energy conversion
	26.05.21	Types of wind turbines
	27.05.21	do
	28.05.21	Aerodynamics of wind rotors.
5th	31.05.21	do
1st	01.06.21	Wind turbine control systems; conversion to electrical power
	02.06.21	do
	03.06.21	Induction and synchronous generators.

	04.06.21	Grid connected and self excited induction generator operation.
2nd	07.06.21	Constant voltage and constant frequency generation with power electronic control.
	08.06.21	Single and double output systems.
	09.06.21	Characteristics of wind power plant
		Biomass Power
	10.06.21	Energy from Biomass.
	11.06.21	Biomass as Renewable Energy Source
3rd	14.06.21	Types of Biomass Fuels - Solid, Liquid and Gas
	16.06.21	do
	17.06.21	Combustion and fermentation
	18.06.21	Anaerobic digestion
4th	21.06.21	Aerobic digestion
	22.06.21	Types of biogas digester
	23.06.21	DO
	24.06.21	Wood gassifier
	25.06.21	Pyrolysis
5th	28.06.21	Bio gas, Bio diesel
		Other Energy Sources
	29.06.21	Tidal Energy: Energy from the tides
	30.06.21	Barrage and Non Barrage Tidal power system
1st	01.07.21	Ocean Thermal Energy Conversion (OTEC).
	02.07.21	do
2nd	05.07.21	Geothermal Energy
	06.07.21	Classification of geothermal energy
	07.07.21	Hybrid Energy Systems
	08.07.21	do
	09.07.21	Need for Hybrid Systems
3rd	13.07.21	Diesel-PV, Wind-PV, Microhydel-PV
	14.07.21	do
	15.07.21	Electric and hybrid electric vehicles.
		do
HOD		PRINCIPAL