

LESSON PLAN

Name of Faculty: Sri Sushanta Kumar Malik, Senior lecturer

Subject: Renewable Energy Power Plants (REPP)(EEPC209) TH-5

Semester: 3rd

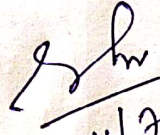
Branch : Electrical Engineering

No of period: 45 (3hr /week)

W.E.F :- 14.07.2025

Week	Period	Topic To Be Covered	Teaching aid to be used
1		UNIT-I: Solar PV and Concentrated Solar Power Plants	
	1	Solar Map of India: Global solar power radiation	Smart Class (Interactive Panel)
	2	Solar PV Concentrated Solar Power(CSP) plants	Smart Class (Interactive Panel)
	3	Construction and working of: Power Tower	Smart Class (Interactive Panel)
2	4	Construction and working of: Parabolic Trough, Parabolic Dish	Smart Class (Interactive Panel)
	5	Construction and working of: Fresnel Reflectors	White board, marker
	6	Solar Photovoltaic (PV) power plant: components layout	Smart Class (Interactive Panel)
3	7	Construction, working of Solar Photovoltaic (PV) power plant	Smart Class (Interactive Panel)
	8	construction, working of Roof top solar PV power system	Smart Class (Interactive Panel)
		UNIT-II : Large Wind Power Plants	
	9	Components, layout and working of Geared type wind power plants	Smart Class (Interactive Panel)
4	10	Components, layout and working of Geared type wind power plants	Smart Class (Interactive Panel)
	11	Components, layout and working of Direct drive type wind power plants	Smart Class (Interactive Panel)
	12	Components, layout and working of Direct drive type wind power plants	Smart Class (Interactive Panel)
5	13	Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG): Construction and working	Smart Class (Interactive Panel)
	14	Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG): Construction and working	Smart Class (Interactive Panel)
	15	Wound Rotor Induction Generator (WRIG): Construction and working	Smart Class (Interactive Panel)
6	16	Variable Speed Electric Generators: Doubly-fed induction generator(DFIG): Construction and working	Smart Class (Interactive Panel)
	17	Variable Speed Electric Generators: Doubly-fed induction generator(DFIG): Construction and working	Smart Class (Interactive Panel)
	18	Wound rotor synchronous generator(WRSG): Construction and working	Smart Class (Interactive Panel)
7	19	Wound rotor synchronous generator(WRSG): Construction and working	Smart Class (Interactive Panel)
	20	permanent magnet synchronous generator(PMSG): Construction and working	Smart Class (Interactive Panel)
		UNIT-III: Small Wind Turbines	
	21	Horizontal axis small wind turbine: direct drive type, components and working	Smart Class (Interactive Panel)
8	22	Horizontal axis small wind turbine: direct drive type, components and working	Smart Class (Interactive Panel)
	23	Horizontal axis small wind turbine: geared type, components and working	Smart Class (Interactive Panel)
	24	Horizontal axis small wind turbine: geared type, components and working	Smart Class (Interactive Panel)
9	25	Vertical axis small wind turbine: direct drive and geared, components and Working	Smart Class (Interactive Panel)
	26	Vertical axis small wind turbine: direct drive and geared, components and Working	Smart Class (Interactive Panel)

	27	Types of towers and installation of small wind turbines on rooftops and open fields.	White board, marker
10	28	Types of towers and installation of small wind turbines on rooftops and open fields.	White board, marker
	29	Electric generators used in small wind power plants	White board, marker
		UNIT-IV: Biomass-based Power Plants	
	30	Properties of solid fuel for biomass power plants: Bagasse, wood chips	White board, marker
11	31	Properties of solid fuel for biomass power plants: rice husk, municipal waste	White board, marker
	32	Properties of liquid and gaseous fuel for biomass power plants: Jatropha	White board, marker
	33	Properties of liquid and gaseous fuel for biomass power plants: bio- diesel gohar gas	White board, marker
12	34	Layout of a Bio-chemical based (e.g. biogas) power plant	Smart Class (Interactive Panel)
	35	Layout of a Bio-chemical based (e.g. biogas) power plant	Smart Class (Interactive Panel)
	36	Layout of a Thermo-chemical based (e.g. Municipal waste) power plant	Smart Class (Interactive Panel)
13	37	Layout of a Thermo-chemical based (e.g. Municipal waste) power plant	Smart Class (Interactive Panel)
	38	Layout of a Agro-chemical based (e.g. bio-diesel) power plant	Smart Class (Interactive Panel)
	39	Layout of a Agro-chemical based (e.g. bio-diesel) power plant	Smart Class (Interactive Panel)
14	40	Revision 1	White board, marker
	41	Revision 2	White board, marker
	42	Revision 3	White board, marker
15	43	Revision 4	White board, marker
	44	Revision 5	White board, marker
	45	Revision 6	White board, marker


 14/7/2022
 HOD (ELECTRICAL)
 GOVT. POLY.
 GAJAPATI