

Govt. Polytechnic Panchkula

Electrical Engineering Department

Discipline : Electrical Engineering

Semester : 5th

Subject : Solar Panel Installation & Maintenance

Lesson Plan Duration : 15 weeks(from October 2021)

Work Load (Lecture/Practical)per week(in Hours) : L- 04, P-02

Week	Theory		Practical
	Day	Topic	Topic
1	1	Introduction Of The Subject,	1.Panel Installation
	2	Its Need, Applications ,Basics on solar energy	
	3	power generation systems	
	4	Use and handling procedure of solar panels	
2	5	Energy storage	
	6	control and conversion	
	7	Basic electrical system and functioning	
	8	Mechanical equipment ,	
3	9	functioning of Mechanical equipment	
	10	Maintenance procedure of equipment	
	11	Site survey	
	12	design and evaluation of various parameters	
4	13	Tools involved in installation of system	2.Using Tools and Machines
	14	Quality and process standards	
	15	Occupational health	
	16	and safety standards	
5	17	Revision	
	18	Quiz	
	19	Class test no.1	
	20	Discussion on Questions of class test	
6	21	Introduction Of The Installation of Solar Panel	
	22	Installation of Solar Panel	
	23	Solar energy system components such as panels, batteries, charge controllers, inverters	
	24	Solar energy system components such as panels, batteries, charge controllers, inverters	
7	25	Significance of volts, amps and watts	
	26	series connection	
	27	parallel connection	
	28	Voltage requirement of various equipment	
8	29	Panel mounting	

	30	inclination and angle of tilt	3.Handling Safety Equipment
	31	Placement of solar panel mounting	
	32	Sunlight and direction assessment	
9	33	Site surveying methods and evaluation parameters	
	34	Site surveying methods and evaluation parameters	
	35	Tools involved in installation of system	
	36	Tools involved in installation of system	
10	37	Revision	Revision
	38	Assignment no.2	
	39	Class test no.2	
	40	Discussion on Questions of class test	
11	41	Coordinate colleagues at work	Revision
	42	Company's policies on incentives, delivery standards, and personnel management	
	43	Importance of the individual's role in the workflow	
	44	Reporting structure	
12	45	Communicating effectively	Revision
	46	Building team coordination	
	47	4. Safety at workplace	
	48	Maintaining the work area safe and secure	
13	49	Handling hazardous material	Revision
	50	Operating hazardous tools and equipment	
	51	Emergency procedures to be followed such as fire accidents, etc.	
	52	Concept of Solar Tracking System	
14	53	Concept of Solar Tracking System	Revision
	54	Revision	
	55	Revision	
	56	Previous Exam Questions solved	
15	57	Revision	Revision
	58	Assignment no.3	
	59	Class test no.3	
	60	Discussion on Questions of class test	

