Lesson Plan

Name of the Faculty : Sanjeev Kumar

Discipline : Electrical Engineering

Semester : 5th

Subject : **Solar Panal Installation and Maintenance (SMIP)**

Lesson Plan duration : 16 weeks (07.09.2020 to 24.12.2020)

Work load per week : Lecture-04 and Practical-03

Week	Theory		Practical	
	Lecture Day	Topic (Including assessment/test)	Practical Day	Topic
1st	1st	Subject introduction and overview	1st	Practical introduction on solar system and define the uses of solar energy and solar panels
	2nd	UNIT-1 CHECK SITE CONDITION,COLLECT TOOLS AND RAW MATERIALS: What is solar energy		
	3rd	Basics on solar energy and power generation systems		
2nd	4th	Use and handling procedure of solar panels	2nd	Practical work on panels connectios
	5th	Energy storage,control and conversion		
	6th	Basic electrical system and functioning		
3rd	7th	Mechanical equipment and its functioning	3rd	Practical work on solar panels installation
	8th	Maintenance procedure of equipment		
	9th	Site survey,design and evalutation of various parameters		
4th	10th	Tools involved in installation of system	4th	Checking of experiments
	11th	Quality and process standards		
	12th	Occupational health and safety standards		
5th	13th	UNIT-2 INSTALLATION OF SOLAR PANELS: solar energy system components such as panels	5th	Define and seen the panel installation using tools
	14th	Batteries,charge controllers,inverters		
	15th	Significance of volts,amps and watts:series and parallel connection		

6th	16th	Voltage requirement of various equipment	6th	Practical work of using tools and machines
	17th	Panel mounting and inclination and angle of tilt		
	18th	Placement of solar panel mounting		
7th	19th	Sunlight and direction assessment	7th	Practical work on battery and inverter
	20th	Site surveying methods and evalution parameters		
	21st	Tools involved in installation of system		
8th	22nd	1st sessional test (Tentative)	8th	Revised practicals
	23rd	Assessment		
	24th	UNIT-3 COORDINATE COLLEAGUES AT WORK: company's policies on incentives		
9th	25th	Delivery standards	9th	Checking of experiments
	26th	Personnel management		
	27th	Importance of the individual's role in the workflow		
10th	28th	Reporting structure	10th	Practical work on handling safety equipment
	29th	Communicating effectively		
	30st	Building team coordination		
11th	31nd	Best position for a solar panel	11th	Practical work on safety precaution by installation of solar panels
	32rd	Why solar panels are an advantage to society		
	33th	Importance of solar energy technologies for development of rural area		
12th	34th	Pollution and energy in production	12th	Practical on how do solar cell work
	35th	Performance and degradation		
	36th	2nd sessional test (Tentative)		
13th	37th	Assessment	13th	Checking of experiments
	38th	UNIT-4 SAFETY AT WORKPLACE: maintaining the work area safe and secure		
	39th	Handling hazardous material		
14th	40st	Operating hazardous tools and equipment	14th	Revision
	41nd	Emergency procedures to be followed such as fire accidents etc.		
	42rd	UNIT-5 CONCEPT OF SOLAR TRACKING SYSTEM		
15th	43th	Define a solar tracking system	15th	Revision
	44th	3rd sessional test (Tentative)		
	45th	Assessment		
16th	46th	Revision	16th	Internal Viva
	47th	Revision		
	48th	Revision		

17th	49th	Assessment	17th	Internal Viva
	50th	Revision		
	51st	Revision		