VIT
Vellore Institute of Technology

SLOT:D1

SCHOOL OF MECHANICAL ENGINEERING

CONTINUOUS ASSESSMENT TEST – I - WINTERSEMESTER 2019-2020

Programme Name & Branch: B.Tech (BCL,BEM,BME)

Course Code: MEE1038

Course Name: Solar Photovoltaic System Design

Faculty Name(s): Dr. Y. Raja Sekhar

Class Number(s): VL2019205002043 **Exam Duration:** 90 mins **Maximum Marks:** 50

General instruction(s):

Attested Data sheet can be permitted

Assume suitable data where ever necessary

Section – A (4x 5 = 20 Marks)		
Sl.No.	**Question**	**Course Outcome (CO)**
1.	What do you understand by Energy and Intensity of Sun?	1
2.	Explain the working principle of any one solar radiation measuring instrument	1
3.	Explain the physics of solar photovoltaic cell	2
4.	Brief on the materials used for manufacturing of Solar PV cells	2
Section – B (3 x 10 = 30 Marks)		
Sl.No.	**Question**	**Course Outcome (CO)**
5	Find today's position of the sun at 10:30 hrs and 14:30 hrsfor New Delhi	1
6	What is the importance of Altitude and Azimuth angles in deriving Sun-Path at a location? Elaborate on the importance of sun-path diagram in the design of photovoltaic systems	1
7	Does incidence angle change with time, if so why? Find the incidence angle on a horizontal surface at Vellore (12.9833^0 N, 79.1833^0 E) on July 1st at 10.30 hrs on a horizontal surface facing due south	1