

Term End External Examination 1st Semester (Session-Feb 2025)

Subject: Skill Enhancement Course

Course No and Title: PHY122S/ Solar PV Installer

Time: 1.15 hours Max Marks:50 Min. Marks:20

Section A: Objective Type Questions

Q1. Choose the appropriate Answer: (4x1.5=06)

- i. Solar cell converts light energy into
A Electrical energy B Thermal energy
C Sound Energy D Heat energy
- ii. Series and parallel combination of the solar cell is known as
A Solar eye B Solar Light
C Solar sight D Solar array
- iii. Full form of FF in the solar field is
A Fill Factor B Form Factor
C Face Factor D Fire Factor
- iv. What is the rate of solar energy reaching the earth's surface
A 1016 W B 865 W
C 1912 W D 2854 W

Section-B: Descriptive Type Questions (Short Type)

Q2: Answer all the Questions (4 x 4 =16)

- i. Why is solar energy advantageous over other sources of energy?
- ii. Define the following terms
i) Global Horizontal Irradia ii) Direct Normal Irradiance
- iii. What is a solar PV system? What are the advantages of a PV system?
- iv. Differentiate between series and parallel connections of modules?

Section – C: Descriptive Type Questions (Medium Type)

Answer all the questions: (2 x 7=14)

Q3. Estimate the angle of inclination for solar panels?

OR

How various electrical circuit parameters can be measured by using Voltmeter and clamp-on meter?

Q4. Identify and differentiate between the types of solar PV system?

OR

Calculate the voltage and current of modules connected in series?

Section – D: Descriptive Type Questions (Long Type)

Answer any one of the following: (1 x 14=15)

- Q5.** What are different components of a solar PV system? Explain the importance and operation of various components?
- Q6.** How will you explain the relationship between voltage and current? Find out how this relationship is different for metals and semi-conductors. Also use V-I graph for discussion.