Q.25 Explain the function of basic electrical system used in PV system. (CO2)
Q.26 Enlist the tools which is used during site survey and installation of PV system. (CO1)
Q.27 Explain the maintenance procedure of equipment used in PV system. (CO4)
Q.28 Describe the significance of volts, amps and watts in PV system.
Q.29 Explain the parallel connection of PV panel. (CO2)
Q.30 Explain the reporting structure in PV industry. (CO2)
Q.31 Explain the benefits of team coordination in PV installation. (CO3)
Q.32 Describe, how handling the hazardous material in PV industry and during PV installation. (CO4)
Q.33 Write the emergency procedure during fire in PV installation area. (CO4)
Q.34 Write a short note on sunlight assessment. (CO2)
Q.35 Explain the site surveying method during PV installation. (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the steps of installing the equipment / component in PV system. (CO1)
Q.37 Explain the working of different solar power generation system with their merits and demerits. (CO2)
Q.38 Explain in details the different types of solar tracking system. (CO2)

(**Note:** Course outcome/CO is for office use only)

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Roll No. .....

Electrical Engg.
Subject:- Solar Panel Installation and Maintenance

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 The single solar cell voltage is about _____ (CO1)
a) 0.2 v b) 0.5 v
c) 1.0 v d) 2.0 v

Q.2 What is the basic component of the PV system? (CO1)
a) Battery b) Charger collector
c) Solar cell d) All of the above

Q.3 Which meter is used to measure the solar radiation flux_____. (CO1)
a) Pyranometer b) Sunshine Recorder
c) Anemometer d) All of the above

Q.4 A DC load is connected to 24 V and the current is 2A. What is the power of the load? (CO2)
a) 24 W b) 48 W
c) 12 W d) 26 W

Q.5 As the temperature of a solar cell decrease how do the current and the voltage change? (CO2)
a) Current decreases and voltage increases
b) Current increases and voltage increases.
c) Current decreases and voltage decreases.
d) Current increases and voltage decreases.

Q.6 What type of mounting system is appropriate for a flat concrete roof? (CO2)

a) horizontal system b) vertical system
c) tilted system d) none of the above

Q.7 When lifting a tall wet lead acid battery to the site how should the battery be handled? (CO4)

a) With two installers at each end when it is on its side then tipped up.
b) In an upright position
c) Using hooks through the battery terminals
d) Carried on the shoulder

Q.8 Identify the best location for the inverter from the list. (CO2)

a) Inside a sealed box
b) Outside and exposed to sunshine
c) Near to, but not directly above, the battery
d) On the battery

Q.9 On the basis of rotation solar tracking system are (CO2)

a) single axis solar tracker
b) double axis solar tracker
c) both (a) and (b)
d) none of the above

Q.10 To make sure all PV projects are completed safely, employers should have policies and procedures which are (Co3)

a) Provide necessary equipment to do job right
b) Provide training to all workers
c) Allow workers to work fast and profitably (or efficient)
d) all of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Define tilt angle. (CO2)

Q.12 Write the two uses of solar panel. (CO2)

Q.13 Define solar module. (CO1)

Q.14 Name which type of storage device is preferred for residential and commercial applications. (CO1)

Q.15 Name the material used for making solar panel mounting structure. (CO1)

Q.16 Which current is produced by solar panel and name the converter used to convert that current. (CO2)

Q.17 Write the two example of non-monetary rewards. (CO3)

Q.18 Write one benefit of individual's role in the workflow. (CO3)

Q.19 List the two operating hazardous tools. (CO4)

Q.20 Write one name of hazardous material in PV industry. (CO4)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Enlist the component used in on grid photovoltaic power generation systems. (CO1)

Q.22 Write the difference between PV cell, PV panel, PV array, PV module. (CO1)

Q.23 Describe the handling procedure of solar panels. (CO4)

Q.24 Explain the different types of solar charge controller. (CO2)