

- Q.29 Explain the function of basic electrical system used in PV system. (CO4)
- Q.30 Enlist component used in a grid photovoltaic power generation system. (CO1)
- Q.31 How can PV array can be protected form lightning surges? (CO2)
- Q.32 Explain operating Hazardous tools used at workplace (CO3)
- Q.33 Explain different company's policies regrading incentives in solar PV installation work? (CO3)
- Q.34 Write the difference between PV array and solar PV module. (CO2)
- Q.35 Describe solar energy storage system (CO3)

#### 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 and component in PV system. (CO1)
- Q.37 Define solar tracking system and classified in details. (CO2)
- Q.38 Write short notes on :
- Basic electrical system and functioning of PV panels. (Co1)
  - Maintenance procedure of solar panel. (CO3)

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#### 5th Sem / Elect

#### 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 On site, your colleague has battery acid in his eyes? (CO1)
- Run away so you don't get acid on you
  - Call for friends
  - Rinse his eyes with plenty of water
  - call the boss
- Q.2 Efficiency of solar energy is used for (CO1)
- 25%
  - 15%
  - 40%
  - 60%
- Q.3 Direct solar energy is used for (CO1)
- Water heating
  - Drying
  - Distillation
  - All of these
- Q.4 A combination of solar panel connected together is known as (CO2)
- Solar cells
  - solar array
  - solar connector
  - none of above
- Q.5 PV arrays work best when sun'ray strike \_\_\_\_\_ degrees to the cells (CO2)

- a) 15                                      b) 30  
c) 60                                        d) 90
- Q.6 Which meter is used to measure the solar radiation flux (CO1)  
a) Pyranometer                      b) Anemometer  
c) Sunshine recorder      d) All of above
- Q.7 Which of the following energy is converted to electricity by battery? (CO4)  
a) Mechanical energy      b) Chemical energy  
c) Thermal energy          d) Electrical energy
- Q.8 Solar heater life span is about (CO1)  
a) 4-6 years                      b) 2-6 years  
c) 1-2 years                      d) 6-7 years
- Q.9 Sun emits \_\_\_\_\_ radiations (CO2)  
a) Infrared  
b) Visible  
c) small amount of ultraviolet  
d) all of above
- Q.10 Infrared radiations gives \_\_\_\_\_ (CO5)  
a) Light energy                  b) heat energy  
c) both a and b                  d) None of these

### SECTION-B

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

- Q.11 Write name of one tool required for solar PV installation. (CO1)
- Q.12 What is mean by PV module? (CO2)
- Q.13 PPE stands for \_\_\_\_\_ (CO4)

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- Q.14 Lead acid batteries are sources of AC. (CO4)
- Q.15 Which current is produced by solar panel and name converter used to convert that current (CO2)
- Q.16 What is basic component of PV system? (CO1)
- Q.17 Write one safety precautions of solar site (CO4)
- Q.18 Most widely used solar material is \_\_\_\_\_ (CO1)
- Q.19 MPPT stands for (CO4)
- Q.20 Enlist the type of solar power generation system used (CO2)

### SECTION-C

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

- Q.21 Enlist the tools which is used during site survey and installation of PV system. (CO1)
- Q.22 Name the mechanical equipment used in PV installation and its function. (CO2)
- Q.23 What are the advantages and disadvantages of photovoltaic solar energy conversion? (CO2)
- Q.24 Write short note on delivery standards during PV installation. (CO3)
- Q.25 Explain the importance of building team coordination. (CO3)
- Q.26 Describe the handling procedure of solar panel. (CO4)
- Q.27 Write emergency procedure during fire in PV installation area. (CO4)
- Q.28 Describe occupational health and safety assessment during solar installation. (CO1)

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