

- Q.26 Explain the steps involved during site survey for PV installation.
- Q.27 Explain the series connection of solar panel.
- Q.28 Write a short note on delivery standards in PV installation and maintenance industry.
- Q.29 Explain, the steps to improve team building coordination between colleagues at workplace.
- Q.30 Define solar tracking system and its types.
- Q.31 Write any three point for the maintenance of equipment used in PV installation.
- Q.32 Explain, how maintain the work areas safe and secure during PV installation.
- Q.33 Write any three precaution for handling of solar panel.
- Q.34 Define Energy storage and name the different types of energy storage device for PV system.
- Q.35 Write a short note on placement of solar panel mounting.

#### **Section-D**

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

- Q.36 Explain the different component used and complete process involved during solar panel installation.
- Q.37 Design a solar panel component rating for a house having one 10watt LED used 6 hours, one fan 50 watt used 8 hours, one TV 120 watt used 4 hours. The system will be powered by 24 volt, 330WP solar module rating.
- Q.38 Describe, in detail the operating hazardous tools and equipment used during solar Panel Installation.

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#### **5th Sem., Branch : Elect Subject : Solar Panel Installation & Maintenance**

Time : 3 Hrs.

M.M. : 100

#### **SECTION-A**

**Note: Multiple type Questions. All Questions are compulsory. (10x1=10)**

- Q.1 The photovoltaic device which generate electricity when exposed to sunlight is called  
 a) Solar Cell                          b) Solar light  
 c) Solar fan                            d) Any of the above
- Q.2 An off grid PV system is not connected to \_\_\_\_\_.  
 a) Battery                              b) Electric grid  
 c) Inverter                             d) Charge controller
- Q.3 What precaution should be carried out during handling of solar panel  
 a) Stop working in bad weather condition  
 b) Wear insulated gloves  
 c) Use cranes or forklift to move solar panel  
 d) All of the above
- Q.4 The device which protect the battery from overcharging in PV system is known as  
 a) Solar charge controller  
 b) Net meter  
 c) AC disconnect switch  
 d) DC disconnect switch

- Q.5 The solar pathfinder takes a \_\_\_\_\_ degree view of the Location of PV installation site  
 a) 90                          b) 180  
 c) 360                          d) None of the above
- Q.6 The best direction of face solar panel in Northern Hemisphere of India  
 a) North                        b) South  
 c) East                         d) West
- Q.7 The angle between horizontal ground and the solar module is known as  
 a) Horizontal angle            b) Tilt angle  
 c) Move angle                 d) Parallel angle
- Q.8 Solar tracking system on the basis of rotation are  
 a) Single axis solar tracker  
 b) Dual axis solar tracker  
 c) Both A & B  
 d) None of the above
- Q.9 Personal protective equipment are  
 a) Helmet                      b) Gloves  
 c) Safety shoes                d) All of the above
- Q.10 Example of monetary rewards are  
 a) Annual incentive            b) Bonus  
 c) Both A & B                 d) None of the above

### Section-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 PV panel consist of one or more PV array. (True/False)  
 Q.12 Define Battery Bank.  
 Q.13 Filed junction box is the interface between solar panel and solar charge controller. (True/False)  
 Q.14 Write the use of angle finder in Installation of PV system.  
 Q.15 Solar panel produces DC. (True/False)  
 Q.16 Solar Cell voltage is measured in \_\_\_\_\_.  
 Q.17 Solar panel is connected in Parallel to increase the output \_\_\_\_\_.  
 Q.18 Define the angle of tilt.  
 Q.19 Expand the term MPPT.  
 Q.20 Write full form of PPE.

### Section-C

- Note:** Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)
- Q.21 Write about On grid Solar Power Generation System.  
 Q.22 Enlist the use of Solar Panel.  
 Q.23 Differentiate between Lead acid batteries and Lithium-ion batteries.  
 Q.24 Write the functions of Mechanical equipment used in PV installation.  
 Q.25 Write the at least five name of tools used in Installation of PV system.