

2112E002

**BACHELOR OF VOCATION**

**Solar Technology**

**Subject: Operation and Maintenance of Solar Systems**

**Subject Code: ST-704**

**Semester: Fifth**

**December 2021**

**Theory (External): 35 Marks**

**Time: 03 Hours**

**Instructions to the Students**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 8 essay-type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labeled

**Roll Number**

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**SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
(10x1=10 Marks)

- A. Define Solar Radiation also write the wave length for solar radiation.
- B. Define solar PV system.
- C. Define inverter.
- D. Explain the function of Transformer.
- E. Define the terms Heat, Power, Work and Energy.
- F. Explain cause of corrosion and write the method for protection from corrosion.
- G. Define solar collectors.
- H. Write the name of lubricants using in tracking drive system.
- I. Define pressure gauge. Write the types of pressure gauge.
- J. Define the function of charge controllers.

**SECTION –B (ESSAY TYPE QUESTIONS)**  
(5x5=25 Marks)

1. Write the protection requirements for solar power PV systems.
2. Define in detail components of solar PV systems with the help of neat diagrams.
3. Write Performance and Operational aspects of solar PV systems.
4. Define function of potential transformer. Write the procedure to maintain and care it.
5. Explain the operation and maintenance of solar thermal systems in Indian Industries.
6. Explain maintenance of tracking systems with a neat sketch.
7. Write the procedure to installation of a solar water heating system.
8. List out the consumable items required for mechanical installation of a Solar Thermal Plant. Explain the main component of a solar thermal Plant.

==END OF PAPER==