

BACHELOR OF VOCATION**Solar Technology****Subject: PV Modul Design and Tharmal Installation****Subject Code: ST-603****Semester: Third****January 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 labelled

Roll Number

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

- A. Define the meaning of module
- B. Define the meaning of array
- C. Define the concept of junction box related to industries
- D. Discuss the function of fuses along with applications
- E. Discuss the function of diodes along with applications
- F. Differentiate between AC and DC supply with suitable industrial applications
- G. Define the function of inverter with examples
- H. Define the applications of sun path diagram
- I. Define the concept of Temporary shading with example
- J. Define the function of isolator switch with neat diagram

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

1. Explain the performance and operating characteristics of PV system with suitable examples and Industrial applications.
2. Discuss the parameters required for designing of PV systems with suitable examples
3. Explain the construction, working and principle of Photovoltaic cell with neat and clean diagram along with industrial applications
4. Explain the construction and working of Solar cell with neat diagram
5. Describe the construction and working of central inverter with neat and clean diagram
6. Explain the properties of grid connected invertors with Industrial applications
7. Discuss the function and importance of earthing with suitable example and industrial applications
8. Discuss the series and parallel connection of PV module with neat diagram and industrial applications.

==END OF PAPER==