

2112E165

BACHELOR OF VOCATION
Solar Technology
Subject: Fundamentals of Solar Energy & Plumbing Engg.
Subject Code: ST-501
Semester: First
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 labelled

Roll Number

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

- A. What is the temperature of solar in Kelvin?
- B. Which of the following energy has the greatest potential among all the sources of renewable energy?
a) Solar energy
b) Wind Energy
c) Thermal energy
d) Hydro-electrical energy
- C. What is the rate of solar energy reaching the earth surface?
a) 1016W
b) 865W
c) 2854W
d) 1912W
- D. Solar radiation which reaches the surface without scattering or absorbed is called _____
(a) Beam Radiation
(b) Infrared radiation
(c) Ultraviolet radiation
(d) Diffuse radiation
- E. What is difference between green energy and solar energy?
- F. State the Boltzmann law?

- G. Solar energy can be directly converted into electrical energy by
a. photoelectric cell
b. dry cell
c. rechargeable cell
d. battery
- H. Write the solar cell equation.
- I. The low temperature in the concentrating solar technologies divided into how many parts?
a. one
b. two
c. three
d. four
- J. The efficiency achieved from photovoltaic is almost _____
(a) 20-45%
(b) 20-40%
(c) 19-24%
(d) None of the above

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

1. Explain the various aspects of energy conservation.
2. Explain the effect of various parameters on the performance of solar water heating system.