

Enroll. No.

Q. P. Code
DT 3026

Unit Test - I (2025-26)

Third Year B. Tech.

Course Code: OE3044

Course Name: OE-I Renewable Energy Sources

Date : Wednesday 13/08/2025

Time : 2:30 To 3:30

Max. Marks: 25

- Instructions:
- 1) All questions are compulsory.
 - 2) Figures in rounded () brackets within the question, indicate scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
 - 3) CO is the index number of the Course Outcome statement.
 - 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
 - 5) Assume suitable data if necessary.
 - 6) Use of non-programmable calculator is allowed.

		Marks	CO	BT Level
Q.1	Answer the following:			
a)	Differentiate between renewable and non-renewable energy sources. Give at least two examples of each.	6	CO2	L2
b)	Explain India's energy dependency on fossil fuels and its impact on the economy.	6	CO4	L4
<u>OR</u>				
b)	Identify any four non-conventional energy sources and describe any two briefly.	6	CO2	L1
Q.2	Answer the following:			
a)	Compare and contrast a Pyranometer and a Pyrhelimeter with respect to their function and usage. Calculate the solar radiation (in kWh/m ² /day) received on a flat surface if the average irradiance is 500 W/m ² for 6 hours.	6	CO4	L3
b)	Define solar radiation (1 mark) and list its three components with brief explanation. (2 marks each)	7	CO2	L1
<u>OR</u>				
b)	Explain the construction and working of a flat plate solar collector with a neat labeled diagram.	7	CO3	L2

