Reg.No | | | | | | | | | | |

SET - 1

Sona College of Technology (Autonomous), Salem -5.
Department of Electrical and Electronics Engineering
Continuous Internal Evaluation Test - 2
Open Elective - U15EE1006R – Renewable Energy Systems
Common to All sections (IV Year / VII Semester)

Date : 23.09.2021 **Time slot : 9.15am to 10.45am**	**Marks : 50** **Duration : 1 ½ hours**

PART – A **Answer All Questions** **(6 x 2 = 12 Marks)**

1.	Name the components of a solar water heater.
2.	List down the factors in determining efficiency of the solar pond.
3.	What is tip- speed ratio?
4.	What are the major categories of biomass conversion process?
5.	List down the parameters considered in designing wind turbine rotors.
6.	How anaerobic digestion does takes place?

PART – B **Answer All questions** **(2 x 5 = 10 Marks)**

7.	What are the factors to be considered while selecting the method of storage?
8.	Write down any two advantages and disadvantages of VAWT.

PART – C **Answer All questions** **(2 x 14 = 28 Marks)**

9.	(a)	(i)	Explain the construction and working of liquid heating flat plate collectors with a neat sketch.	7
		(ii)	Obtain an expression for power developed due to wind.	7
			(OR)	
	(b)	(i)	Discuss the working of solar PV water pumping.	7
		(ii)	What are the advantages and disadvantages of bio energy?	7
10.	(a)	(i)	Discuss the performance factors involved in wind energy generation?	7
		(ii)	With neat diagram explain the stand alone wind turbine plants for a domestic system.	7
			(OR)	
	(b)	(i)	What are the biomass energy conversion processes explain any one of them in detail.	7
		(ii)	How the biogas plants are classified and explain the continuous double stage process of bio gas digester?	7

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