Q.P. Code: 16ME313 **R16**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech IV Year I Semester Regular Examinations Nov/Dec 2019

NON-CONVENTIONAL ENERGY RESOURCES

(Common to All)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	**a**	What is the need of renewable energy?	**6M**
	b	Describe Renewable Energy Scenario in Andhra Pradesh.	**6M**
		OR	
2	**a**	Outline the challenges and remedies associated in the use of solar energy.	**6M**
	b	Generate a report on the usage of energy around the world.	**6M**
		UNIT-II	
3	**a**	Mention the thermal analysis of flat plate collecto.	**6M**
	b	Write the working principle of flat plate collector with a neat sketch.	**6M**
		OR	
4	**a**	Illustrate the functions of various components in flat plate collectors.	**6M**
	b	How Flat plate collectors are different from Concentrating collectors.	**6M**
		UNIT-III	
5	**a**	Describe with a neat sketch the working of wind energy system with main components.	**6M**
	b	How the electricity will be generated from wind turbine generator.	**6M**
		OR	
6	**a**	Differentiate HAWT and VAWT.	**6M**
	b	Explain briefly the functioning of Darrieus Wind Turbine.	**6M**
		UNIT-IV	
7	**a**	Describe the working of Spreader stroker with a neat sketch.	**6M**
	b	Mention the need of Fluidized Bed Combustion and explain it with a neat diagram.	**6M**
		OR	
8	**a**	What is biomass gasifier and write its gasification reactions.	**6M**
	b	How do you classify the gasifiers and explain anyone in detail.	**6M**
		UNIT-V	
9	**a**	What are the different methods of hydrogen storage	**6M**
	b	Differentiate wave and tidal energy.	**6M**
		OR	
10	**a**	How do you classify hydrogen production method and mention any one in detail.	**6M**
	b	Mention the applications of hydrogen.	**6M**

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