	CBCS SCHEME	TUIE UI ENGINEOTINE	
USN		RARY	18ME65

Sixth Semester B.E. Degree Examination, July Vigust 2022 Non Conventional Energy Sources

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

		received any 111 L jun questions, enovaing or 2 jun questions			
1	9	With next shotal and a naver plant	(10 Marks)		
		With neat sketch explain hydro power plant. List the advantages and disadvantages of non-conventional energy sources.	(10 Marks)		
	0.	List the advantages and disadvantages of non-conventional energy sources.			
		OR			
2	a.	With a neat sketch, explain pyrheliometer.	(10 Marks)		
	b.	What is need of alternative energy sources? Explain by considering solar energy.	(10 Marks)		
		Module-2			
3	a.	Define: (i) Solar latitude (ii) Declination angle (iii) Zenith angle			
		(iv) Hour angle (v) Surface azimuth angle	(10 Marks)		
	b.	With a neat sketch, explain working principle of solar pond.	(10 Marks)		
		OR			
4	a.	With neat sketch, explain solar energy water heating.	(10 Marks)		
	b.				
		(i) Sensible heat storage. (ii) Latent heat storage.	(10 Marks)		
		W. L.L. 2			
_		Module-3	collectors		
5	a.	List and explain the various parameters that effect the performance of flat plate	(10 Marks)		
	b.	Write notes on collector efficiency factor and collector flow factor.	(10 Marks)		
		OR			
6	a.	With a neat sketch, explain photovoltaic conversion.	(10 Marks)		
	b.	Explain the application of solar cell for traffic lighting with a circuit diagram.	(10 Marks)		
	Module-4				
7	a.	List the types of wind mills. Explain horizontal axis wind machine.	(10 Marks)		
	b.	List the advantages, disadvantages and applications of wind energy.	(10 Marks)		
		On			
		OR	(10.11)		
8	a.	With a neat sketch, explain the operation of tidal power plant.	(10 Marks)		
	b.	List the advantages and disadvantages of Tidal plants.	(10 Marks)		
		Module-5			
		With a neat sketch, explain Geothermal energy system by Hot Dry Rock (HDR).	(10 Marks)		
9	a.	List and explain the problems associated with geothermal system operation.	(10 Marks)		
	b.	List and explain the problems associated with geometrial system operation.	(10 Marks)		
OR					
10	9	Explain the biomass sources available for biogas generation.	(10 Marks)		
10	a. b.	With neat sketch, explain Batch type Biogas plants.	(10 Marks)		
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