Lear	nino	Librarian Resource Centr rya Institutes
USN		
Tin	ne: (Sixth Semes No 3 hrs.
	Λ	ote: Answer any 1
1	a. b.	With neat sketch List the advantag
2	a. b.	With a neat sketc What is need of a
3	a. b.	Define : (i) Solar (iv) Hour With a neat sketc
4		Widow

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8=50, will be treated as malpractice.

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

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18ME651

(10 Marks)

Sixth Semester B.E. Degree Examination, July/August 2022 **Non Conventional Energy Sources**

Max. Marks: 100

te: Answer any FIVE full auestions, choosing ONE full auestion from each module.

	1	tote: Answer any FIVE full questions, choosing ONE full question from each mo	dule.
		Module-1	
1	a.	With neat sketch explain hydro power plant.	(10.3% 1.)
	b.	List the advantages and disadvantages of non-conventional energy sources.	(10 Marks)
		2.35 the devantages and disadvantages of non-conventional energy sources.	(10 Marks)
		OR	
2	a.	With a neat sketch, explain pyrheliometer.	(10 Mardra)
	b.	What is need of alternative energy sources? Explain by considering solar energy.	(10 Marks) (10 Marks)
		Explain by considering solar chergy.	(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		With neat sketch, explain solar energy water heating.	(10 Marks)
	b.	Explain the following:	
		(i) Sensible heat storage. (ii) Latent heat storage.	(10 Marks)
		Madala 2	
5	a.	Module-3 List and explain the various parameters that offset the performance of flat plate.	11
	u.	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)
			(10 Iviains)
		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		List the types of wind mills. Explain horizontal axis wind machine.	(10 Marks)
	D.	List the advantages, disadvantages and applications of wind energy.	(10 Marks)
		OP	
8	a.	With a neat sketch, explain the operation of tidal power plant.	(40.75.4.)
U	b.	List the advantages and disadvantages of Tidal plants.	(10 Marks)
	٠.	21st the advantages and disadvantages of Tidal plants.	(10 Marks)
		Module-5	
9	a.	With a neat sketch, explain Geothermal energy system by Hot Dry Rock (HDR).	(10 Marks)
	b.	List and explain the problems associated with geothermal system operation.	(10 Marks)
		S Formula in	(
		OR	
10	a.	Explain the biomass sources available for biogas generation.	(10 Marks)
	h	With neat sketch, explain Ratch type Riogas plants	(10 3 7 1 :

With neat sketch, explain Batch type Biogas plants.