Enrollment 1	No:	Exam Seat No:				
		H UNIVERSITY camination-2020				
Subject Nan	ne : Alternate Energy Source	S				
Subject Cod	e: 4TE03AES1	Branch: B.Tech (Mechanical)				
Semester: 3	Date: 17/03/2021	Time: 11:00 To 02:00	To 02:00 Marks: 70			
(2) Instr(3) Drav		any other electronic instrument is prohir book are strictly to be obeyed. necessary) at right places.	bited.			
Q-1	Attempt the following quest	tions:	(14)			
a)	Which of the following is a d a) High pollution c) High running cost	isadvantage of renewable energy? b) Available only in few places d) Unreliable supply				
b)		Velfare wable Energy				
c)	Lignite, bituminous and anthr (a) Nuclear fuel (b) Coal	racite are different ranks of: (c) Natural gas (d) Biogas				
d)	In what form is solar energy i a) Ultraviolet Radiation c) Infrared radiation	b) Electromagnetic waves				
e)	A Solar cell is an electrical device that converts the energy of light directly into electricity by the a) Photovoltaic effect b) Chemical effect					
~	c) Atmospheric effect	d) Physical effect				
f) How much is the average temperature at depth of 10 km of earth surface?						



	a) 200°C	b) 900°C	c) 650°C	d) 20°C		
g)	9. The hole comes out is			m where the	e steam from the earth	
	a) Gash	b) M	ud pot	c) Void	d) Fumarole	
h)	The main co	-	_			
	a) Methanec) Nitrogen		b) Carbon d) Hydroge			
i)	Which of the a) Anaerobic c) Fermentar	c treatmer	nt b	produce bid b) Aerobic tr l) Pyrolysis	ogas from biomass? reatment	
j)	Where is the a) Jaisalmer b) Muppand c) Lamba ba d) Chakala V	Wind Paral Wind F al Wind F andar, porl	k, Rajastha Farm, Tamil bandar, Guj	l Nadu arat	ndia?	
k)	Who first rea a) d'Arsonva c) James Pre	al	b)		Edmond Becquerel	
1)	Which is the accumulated a) Wind ene c) Ocean the	on the surgy	irface of wa	nter?	b) Wave energy d) Solar energy	
m)	The energy management function is generally vested in – (a) Senior Management (b) One energy manager or co-ordinator (c) Distributed among number of middle manager (d) (b) & (c) together					
n)	An energy p a) Target end b) Time peri c) Declaration	ergy cons	umption red luction	duction	ent	



d) Future production projection

Attempt any four questions from Q-2 to Q-8

Q-2		Attempt all questions	(14)
	a)	Discuss the advantages of renewable energy sources.	7
	b)	Design consideration for solar energy collectors	7
Q-3		Attempt all questions	(14)
	a)	Compare different renewable energy sources development in India	7
	b)	Compare and contrast the solar angles and derived solar angles.	7
Q-4		Attempt all questions	(14)
	a)	Summarize site selection procedure for wind mills for power generation	7
	b)	List the utility systems working with solar energy and discuss any two in brief.	7
Q-5		Attempt all questions	(14)
	a)	Classify Bio Gas plants.	7
	b)	List advantages and disadvantages of Geothermal energy as compared to Wind energy	7
Q-6		Attempt all questions	(14)
	a)	Illustrate the stages of anaerobic digestion process	7
	b)	Describe the construction and working of OTEC system based on closed cycle with help of schematic diagram.	7
Q-7		Attempt all questions	(14)
	a)	Show the significance of Energy Audit for a firm.	7
	b)	Explain operating principle of Microhydel Power Plant.	7
Q-8		Attempt all questions	(14)
	a)	Tell the meaning of star rating assigned to electrical appliances.	7
	b)	List and explain the components of a Microhydel power plant.	7

