



# MAKE-UP EXAM

BETCKE205/BETCK205E

Second Semester B.E./B.Tech. Degree Examination, Nov./Dec. 2023

## Renewable Energy Sources

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
 2. M : Marks , L: Bloom's level , C: Course outcomes.  
 3. VTU Handbooks are permitted.

Module – 1			M	L	C
Q.1	a.	Explain Conventional and Non – conventional Energy sources briefly.	10	L2	CO1
	b.	Explain Renewable Energy sources in India.	10	L2	CO1
OR					
Q.2	Explain the following : i) Solar energy    ii) Wind energy    iii) Biomass energy iv) Ocean thermal energy.		20	L2	CO1
Module – 2					
Q.3	a.	Explain Solar Radiation and its estimation with neat diagram.	10	L2	CO2
	b.	Explain with neat diagram : i) Pyrano meter    ii) Pyrhelio meter.	10	L2	CO2
OR					
Q.4	a.	What is Solar Pond? Explain with neat sketch of a Solar Pond Power Plant.	10	L2	CO2
	b.	What is Photo Voltaic Cell? Explain Photo voltaic cell, with neat diagram.	10	L2	CO2
Module – 3					
Q.5	a.	What is Wind Energy? Explain the availability of Wind energy in India.	10	L2	CO3
	b.	Explain with a neat diagram of Horizontal axis with turbine system.	10	L2	CO3
OR					
Q.6	a.	Explain i) Photosynthesis process    ii) Biomass Conversion Technologies.	10	L2	CO3
	b.	Explain the Fixed dome Biomass technologies.	10	L2	CO3
Module – 4					
Q.7	a.	What is Tidal Energy? Explain Single basin Tidal Power Plant, with neat diagram.	10	L2	CO4
	b.	What are the advantages and limitations of Tidal Energy?	10	L2	CO4
OR					

Q.8	a.	Explain working of OTEC Power station, with neat diagram.	10	L2	CO4
	b.	Mention : i) Advantages and limitations of OTEC. ii) Advantages and limitations of Wave energy.	10	L2	CO4
<b>Module - 5</b>					
Q.9	a.	Explain Fuel Cell technology and classify the Fuel cell technologies.	10	L2	CO5
	b.	What is Zero Energy concept and explain Zero energy building concept briefly.	10	L2	CO5
<b>OR</b>					
Q.10	a.	Explain the Electrolysis method of Hydrogen production.	10	L2	CO5
	b.	Explain Hydrogen Energy storage and its applications.	10	L2	CO5

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