

CBCS SCHEME



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BETCKE205/205E

Second Semester B.E. B.Tech Degree Examination, Dec. 2023/Jan.2024

Renewable Energy Source

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.*

Module – 1			M	L	C
Q.1	a.	Briefly explain the energy and sustainable development and the implications of renewable energy.	10	L2	CO1
	b.	Discuss renewable energy availability in India and world.	10	L2	CO1
OR					
Q.2	a.	Explain briefly solar energy and its applications.	10	L2	CO1
	b.	Briefly describe wind and biomass energy.	10	L2	CO1
Module – 2					
Q.3	a.	Explain with sketch working of pyrokelimeter.	10	L2	CO2
	b.	Explain with a sketch solar flat plate collector.	10	L2	CO2
OR					
Q.4	a.	Explain the working of solar Pond power generation.	10	L2	CO2
	b.	Explain with a sketch principle of the solar photovoltaic cell.	10	L2	CO2
Module – 3					
Q.5	a.	Explain with a sketch the basic components of the Wind Energy Conversion System (WECS).	10	L2	CO3
	b.	Explain with a sketch horizontal axis wind conversion system.	10	L2	CO3
OR					
Q.6	a.	Explain the photosynthesis process.	7	L2	CO3
	b.	Classify biomass conversion technologies.	5	L1	CO3
	c.	Explain with a sketch down draft gasifies.	8	L2	CO3
Module – 4					
Q.7	a.	Explain the fundamental characteristics of tidal energy.	8	L2	CO4
	b.	Explain the double basin arrangement tidal power plant.	8	L2	CO4
	c.	What are the advantages of tidal energy?	4	L1	CO4
OR					
Q.8	a.	Explain the principle of the working the OTEC power station.	8	L2	CO4
	b.	Explain wave energy.	7	L2	CO4
	c.	What are the problems associated with OTEC?	5	L1	CO4
Module – 5					
Q.9	a.	Explain the fuel cell.	8	L2	CO5
	b.	Explain zero energy concepts.	8	L2	CO5
	c.	What are the problems associated with hydrogen energy.	4	L1	CO5
OR					
Q.10	a.	Describe hydrogen energy. What are its benefits?	10	L2	CO5
	b.	Describe hydrogen energy storage and applications.	10	L2	CO5