

# CBCS SCHEME

BETCK205E



## Second Semester B.E./B.Tech. Degree Examination, June/July 2025 Renewable Energy Sources

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.	Explain the availability of renewable sources in India and social implication of renewable energy.	10	L2	CO1
	b.	Briefly explain oil shale and internet of energy.	10	L2	CO1
OR					
Q.2	a.	Briefly describe OTEC and geothermal energy.	10	L2	CO1
	b.	Briefly describe tidal energy and biomass energy.	10	L2	CO1
Module – 2					
Q.3	a.	With a neat sketch explain sunshine recorder and flat plate collector.	10	L2	CO2
	b.	Explain photo voltaic cell and its application.	10	L2	CO2
OR					
Q.4	a.	Explain with a neat sketch the device used to measure direct beam and global beam.	10	L2	CO2
	b.	Explain solar pond electric power plant along with its advantages and disadvantages.	10	L2	CO2
Module – 3					
Q.5	a.	Briefly explain the availability of wind in India and its major problems associated with wind power.	10	L2	CO3
	b.	Explain with a neat sketch Savonius and Darrieus types of wind turbine.	10	L2	CO3
OR					
Q.6	a.	Explain with a neat sketch urban to waste energy conversion.	8	L2	CO3
	b.	Explain photosynthesis process.	6	L2	CO3
	c.	Sketch and label fixed dome biomass conversion.	6	L2	CO3
Module – 4					
Q.7	a.	Explain with a neat sketch single basin tidal power generation.	10	L2	CO3
	b.	Explain harnessing tidal energy and list the advantages and disadvantages of tidal power generation.	10	L2	CO3
OR					
Q.8	a.	Explain about OTEC power stations in the world and their problems.	10	L2	CO4
	b.	With neat sketch explain working principle of open cycle OTEC along with its advantages and disadvantages.	10	L2	CO4
Module – 5					
Q.9	a.	Discuss the benefits of hydrogen energy and problems associates with hydrogen energy.	10	L2	CO5
	b.	Explain with sketch electrolysis hydrogen production technology.	10	L2	CO5
OR					
Q.10	a.	Discuss about hydrogen energy storage.	10	L2	CO5
	b.	With a neat sketch explain Fuel cell.	10	L2	CO5

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