

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: B.Tech
BRANCH: MECHANICAL ENGG.**

**SEMESTER : IV
SESSION : SP/2025**

SUBJECT: ME217 RENEWABLE ENERGY RESOURCES

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	List the advantages and disadvantages of renewable energy sources.	[5] 1	L1
Q.1(b)	Discuss Indian energy scenario.	[5] 1	L2
Q.2(a)	Explain with neat sketch working of forced circulation solar water heater.	[5] 2	L2
Q.2(b)	Describe with neat sketch working of solar furnace.	[5] 2	L1
Q.3(a)	List the advantages and disadvantages of wind energy conversion system.	[5] 3	L1
Q.3(b)	Explain with neat sketch working principle of vertical axis wind turbine.	[5] 3	L2
Q.4(a)	Discuss briefly the densification and incineration process of biomass conversion technology.	[5] 4	L2
Q.4(b)	Explain briefly the factors which affect generation of biogas.	[5] 4	L2
Q.5(a)	Describe with neat sketch working of an ocean thermal energy conversion(OTEC)	[5] 5	L1
Q.5(b)	Explain with neat sketch working of a tidal power plant (double-effect/cycle system).	[5] 5	L2

:30/04/2025 M: