

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

CLASS: B.TECH

BRANCH: MECHANICAL ENGG.

SUBJECT: ME217 RENEWABLE ENERGY RESOURCES

SEMESTER : IV

SESSION : SP/2023

TIME: 3Hours

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)	Describe the Indian energy scenario.	[5] CO-1	L-2
Q.1(b)	State the advantages and disadvantages of non-conventional energy sources.	[5] CO-1	L-1
Q.2(a)	Explain with neat sketch working principle of solar still.	[5] CO-2	L-1
Q.2(b)	Describe the working principle of solar furnace with neat sketch.	[5] CO-2	L-2
Q.3(a)	List the advantages and disadvantages of wind energy conversion system.	[5] CO-3	L-1
Q.3(b)	Explain with neat sketch working principle of horizontal axis wind turbine.	[5] CO-3	L-1
Q.4(a)	What are the factors which affect generation of biogas? Explain any two of them.	[5] CO-4	L-1
Q.4(b)	Explain briefly, with a neat sketch the working principle of floating drum type Biogas plant(KVIC Model)	[5] CO-4	L-1
Q.5(a)	Explain with neat sketch working principle of single basin tidal power plant.	[5] CO-5	L-1
Q.5(b)	Describe with neat sketch working principle of closed cycle ocean thermal energy Conversion (OTEC) plant.	[5] CO-5	L-2

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