

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION MO/2022)

CLASS: MTECH/IMSC
BRANCH: CS/IT/SER/CIVIL/ECE/IMH

SEMESTER: III/VII
SESSION: MO/2022

SUBJECT: ME683 RENEWABLE SOURCE OF ENERGY
TIME: 03 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. Graph paper will be supplied to the candidates
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- Q.1(a) What are different forms of energy? How energy sources are classified? [5]
Q.1(b) What are advantages and disadvantages of renewable energy sources? [5]
- Q.2(a) Explain with neat sketch working principle of natural circulation solar water heater. [5]
Q.2(b) Explain with neat sketch working principle of solar furnace. [5]
- Q.3(a) State the advantages and disadvantages of wind energy conversion systems. [5]
Q.3(b) Explain with neat sketch working principle of horizontal axis wind turbine. [5]
- Q.4(a) What are the factors which affect the generation of bio-gas? Explain briefly. [5]
Q.4(b) Explain with neat sketch working principle of floating drum type bio-gas plant. [5]
- Q.5(a) Explain with neat sketch working principle of closed cycle OTEC plant. [5]
Q.5(b) Enumerate essential elements of hydro-electric plant with neat sketch. [5]

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