

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD – 402 103**

Winter Semester Examination – Dec 2019

Branch: M. Tech. (Electrical Engineering)

Semester: I

Subject: Renewable Energy Systems (MTEPS102/MTEE104B)

Date: 17/12/2019

Marks: 60

Time: 3Hrs.

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt any five questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

Q.1. Solve any one of the following. (12)

- a. Explain in details Concept of Clean Development Mechanism (COM) and Prototype Carbon Funds (PCF)
- b. Classify the Energy resources (Conventional and nonconventional) and explain the concept of Energy and its environmental impacts.

Q.2. What is Biomass? Explain the resources of biomass. Explain the ocean-thermal energy conversion systems. (12)

Q.3. Explain different types of forces on the blades of a wind propeller. Also explain wind power density with proper expression. (12)

Q.4. Discuss the performance of grid connected wind power system. (12)

Q.5. Solve Any Two of the following. (12)

- a. List the merits and limitation of a solar Photovoltaic system.
- b. Characteristics of PV systems
- c. Construction of wind Turbine.

Q.6. Solve the following.

- a. Describe critical parameters require for integration of grid with the system. (06)
- b. Explain the different power quality issues arising in grid connected system. (06)

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