

Code No.: ME741PE

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H.T.No.

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Regular) - November- 2024
RENEWABLE ENERGY SOURCES
(MECH)

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(20 Marks)

1. a) List out the different types of RES. [2M]
- b) Discuss the role of renewable source. [2M]
- c) List the types of solar energy system. [2M]
- d) Define solar photovoltaic and solar thermal. [2M]
- e) List the components of Wind power plant. [2M]
- f) Classify different types of Wind power plant. [2M]
- g) What is Biomass? [2M]
- h) List out the organic materials used in biomass plant. [2M]
- i) What are the different types of ocean technology? [2M]
- j) What are the limitations of tidal power generation? [2M]

PART-B

(50 Marks)

2. Generalize the energy scenario of conventional energy sources. [10M]
- OR**
3. Write about the availability of conventional energy sources in the world. [10M]
4. Explain in detail about solar thermal conversion devices and storage. [10M]
- OR**
5. Explain the measurement and estimation techniques of solar plant in detail. [10M]
6. Distinguish between vertical axis wind turbine and horizontal axis wind turbine. [10M]
- OR**
7. Generalize the factors to be considered for the site selection to install the wind power plant. [10M]
8. Describe in detail the various factors affecting bio digestion of a gas. [10M]
- OR**
9. Explain the alcohol production from biomass and bio diesel production. [10M]
10. Discuss about small hydro power plant and its types. [10M]
- OR**
11. Discuss about geo thermal plant and its types. [10M]
