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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year I Semester Regular Examinations December-2021

NON-CONVENTIONAL ENERGY RESOURCES

(Open Elective- III)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Define briefly about Hydro Electric Energy. L1 6M
b Interpret the merits and demerits of primary energy sources. L2 6M

OR

- 2 Describe Renewable Energy Scenario in Andhra Pradesh. L1 12M

UNIT-II

- 3 a Describe with a neat sketch working of a solar water heating system. L2 6M
b Illustrate the working of pyranometer with a neat sketch. L2 6M

OR

- 4 a Discuss about Extraterrestrial and Terrestrial solar radiation. L2 6M
b Derive an equation for the thermal analysis of flat plate collector. L4 6M

UNIT-III

- 5 a Discuss the importance of measuring wind speed and name its measuring instruments. L6 6M
b List out the uses and working of wind sock in aviation industry. L4 6M

OR

- 6 Classify the wind energy systems and explain their working with neat sketch. L4 12M

UNIT-IV

- 7 a What is biomass and why it is called as renewable energy? L1 6M
b What are the different forms of bio energy? L1 6M

OR

- 8 a Explain about biomass direct combustion. L2 6M
b Name various stokers used for the combustion of biomass and explain anyone with a neat figure. L1 6M

UNIT-V

- 9 What is tide? Explain the basic components of a tidal power plant and state their merits and demerits. L2 12M

OR

- 10 a List out the merits and demerits of hydrogen energy. L4 6M
b Explain the hydrogen production through Electrolysis process. L2 6M

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