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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

M.Tech II Year I Semester Regular Examinations January 2021

DESIGN OF SOLAR AND WIND SYSTEM

(Thermal Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a List out the applications of concentrating type collectors. 6M
b What are the limitations of conventional energy sources? 6M

OR

- 2 Define solar radiation. Explain the process of capturing solar radiation. 12M

UNIT-II

- 3 a List all the disadvantages of nuclear energy. 6M
b Describe Fast Breeder reactor with a line diagram. 6M

OR

- 4 Discuss the different types of Nuclear energy technologies. 12M

UNIT-III

- 5 a What is Betz Model? 6M
b Enumerate the characteristics of Geothermal energy. 6M

OR

- 6 Classify wind energy conversion systems and explain. 12M

UNIT-IV

- 7 a Illustrate the sources of production of hydrogen. 6M
b Identify the applications of hydrogen. 6M

OR

- 8 Elucidate the process of thermal decomposition of water. 12M

UNIT-V

- 9 What is meant by Direct energy conversion? What are the principles of Direct energy conversion? 12M

OR

- 10 Outline all the photovoltaic solar applications. 12M

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