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

B.Tech IV Year I Semester Supplementary Examinations August-2021
NON-CONVENTIONAL ENERGY RESOURCES

Open Elective
(Common to All)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Assess the need of renewable energy resources. 6M
b Determine the impact of Energy Utilization on environment. 6M

OR

- 2 a Summarize short notes on hydro Electric Energy. 6M
b Express the advantages and disadvantages of Hydroelectricity. 6M

UNIT-II

- 3 What are the types of solar radiation measuring Instruments? Explain the working of Sunshine recorder with a neat sketch. 12M

OR

- 4 a List out the applications of solar PV cell. 6M
b What factors affect the performance of solar flat plate collector? 6M

UNIT-III

- 5 a Identify the importance of measuring wind speed and name its measuring instruments. 6M
b Determine the use of wind sock in aviation industry. 6M

OR

- 6 a Explain briefly the functioning of Darrieus Wind Turbine. 6M
b What is the impact of wind energy on environment? 6M

UNIT-IV

- 7 a What is biomass direct combustion? Explain in detail. 6M
b Name various stokers used for the combustion of biomass and explain anyone with a neat figure. 6M

OR

- 8 Explain the working of biomass Cogeneration system with a neat sketch and also mention its applications. 12M

UNIT-V

- 9 What is tide? Explain tidal energy and its conversion with neat diagram. 12M

OR

- 10 What is the basic principle of ocean thermal energy conversion? What are the main types of OTEC power plants? Describe their working. 12M

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