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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**B.Tech III Year I Semester Supplementary Examinations August-2022****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 Discuss the Primary Energy sources in detail . L6 6M
 b Illustrate the working of thermal power plant with a neat sketch. L2 6M

OR

- 2 a Define conventional and Non-Conventional energy with Examples. L1 6M
 b Outline the merits and demerits of Conventional energy sources. L2 6M

UNIT-II

- 3 a List out the applications of solar PV cell. L1 6M
 b What factors affect the performance of solar flat plate collector? L1 6M

OR

- 4 a Explain the working of Pyrheliometer with a neat sketch. L2 6M
 b Differentiate flat plate collector with concentrating type collector. L2 6M

UNIT-III

- 5 a Explain briefly the functioning of Darrieus Wind Turbine. L2 6M
 b What is the impact of wind energy on environment? L1 6M

OR

- 6 a Describe the working of ducted wind turbine with its merits and demerits. L1 6M
 b Explain the working of hot wire anemometer with a neat sketch. L2 6M

UNIT-IV

- 7 Explain the working of biomass Cogeneration system with a neat sketch and also mention its applications. L2 12M

OR

- 8 a Express the characteristics of biodiesel. L2 6M
 b Discuss the applications of Biomass Energy along with its impact on environment. L6 6M

UNIT-V

- 9 Explain the working of fuel cell and their applications. L2 12M

OR

- 10 Explain in detail the wave energy conversion by floats . L2 12M

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