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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR
(AUTONOMOUS)**B.Tech III Year I Semester Regular Examinations March-2023****NON-CONVENTIONAL ENERGY RESOURCES**

(Open Elective-I)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a "Economic growth of a country depends on Energy" Justify the statement. CO1 L5 6M
b Explain any three renewable energies. CO1 L2 6M
- OR
- 2 a Discuss about Hydro Electric Energy. CO1 L2 6M
b Interpret the merits and demerits of primary energy sources. CO1 L2 6M

UNIT-II

- 3 Enumerate the different types of concentrating type collectors. CO2 L1 12M
- OR
- 4 a Explain the process of solar photovoltaic conversion. CO2 L2 6M
b How do you convert saline water into potable water? Explain. CO2 L2 6M

UNIT-III

- 5 a List out the uses and working of wind sock in aviation industry. CO3 L4 6M
b Explain the process of wind formation. CO3 L2 6M
- OR
- 6 Describe the factors to be considered in the selection of site for wind turbines. CO3 L2 12M

UNIT-IV

- 7 a Explain about biomass direct combustion. CO4 L1 6M
b Name various stokers used for the combustion of biomass and explain anyone with a neat figure. CO4 L2 6M
- OR
- 8 a Describe the working of Spreader stoker with a neat sketch. CO4 L1 6M
b Evaluate the need of Fluidized Bed Combustion and explain it with a neat diagram. CO4 L5 6M

UNIT-V

- 9 a List out the merits and demerits of hydrogen energy CO5 L4 6M
b Explain the hydrogen production through Electrolysis process. CO5 L2 6M
- OR
- 10 What is the nature of tidal power extracted from single basin arrangement and double basin arrangement? CO5 L1 12M

*** END ***

UNIVERSITY OF ENGINEERING & TECHNOLOGY, PUTHUR

(AUTONOMOUS)

2nd Year III Semester Regular Examinations March-2023

70% CONVENTIONAL ENERGY RESOURCES

(Course-I)

Max. Marks: 80

Time: 3 hours

(Answer all Five Parts 2 x 12 = 60 Marks)

223

UNIT-I

- 1 a) Forecast growth of a country depends on energy. Justify the statement. 6M
- b) Explain any four renewable energies. 6M

OR

- 2 a) Discuss about Hydro Electric Energy. 6M
- b) Describe the merits and demerits of primary energy sources. 6M

UNIT-II

- 3 Enumerate the different types of concentrating solar collectors. 12M

OR

- 4 a) Explain the process of solar photovoltaic conversion. 6M
- b) How does a current source work into a voltage source? Explain. 6M

UNIT-III

- 5 a) List out the use and working of wind sock in aviation industry. 6M
- b) Explain the process of wind tunnel. 6M

OR

- 6 Describe the factors to be considered in the selection of site for wind turbines. 12M

UNIT-IV

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

OR

- 8 a) Describe the working of spreader stoker with a neat sketch. 6M
- b) Evaluate the need of fluidized bed Combustion and explain it with a neat diagram. 6M

UNIT-V

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

OR

- 10 What is the nature of total power extracted from single busbar system and double busbar arrangement? 12M

*** END ***