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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR**  
(AUTONOMOUS)**M.Tech II Year I Semester Regular Examinations March-2022****WASTE TO ENERGY****(Open Elective)**

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 Explain the importance of Industrial waste utilization with neat sketches L2 12M

**OR**

- 2 Write short notes on conversion devices wrt waste management L3 12M

**UNIT-II**

- 3 What are the various types of pyrolysis? Comparison between methods L2 12M

**OR**

- 4 Discuss Slow and Fast Pyrolysis methods L1 12M

**UNIT-III**

- 5 Explain the design, construction and operation of fluidized bed gasifier. L3 12M

**OR**

- 6 Explain Gasifier burner arrangement for thermal heating in detail. L3 12M

**UNIT-IV**

- 7 Explain Design, Construction and Operation of Inclined Grate Combustor L2 12M

**OR**

- 8 Briefly discuss various types of Combustors L3 12M

**UNIT-V**

- 9 Write short notes on L3

(i) Thermo Chemical Conversion 6M

(ii) Direct combustion of Biomass 6M

**OR**

- 10 Explain Design, Constructional features of Biogas Plant Technology L3 12M

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