

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)  
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajiri (Dist), Hyderabad

**M.TECH III SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019**

Subject: Gas Insulated Systems

Branch/Specialization: **EEE/ Electrical Power Systems**

**Time: 3 hours**

**Max. Marks: 70**

**Answer ALL questions of the following**

**5x 14 Marks= 70 Marks**

1. Explain chemical properties GIS.

OR

2. Explain the specifications of SF<sub>6</sub> gas for GIS application.

3. Compare the planning and installation components of a GIS Station with air insulated substation.

OR

4. What are the economics of GIS system and also explain features of GIS.

5. Explain design aspects of GIS components.

OR

6. Explain thermal considerations in the design of GIS.

7. Compute the Propagation and Mechanism of VFTO.

OR

8. Explain testing of GIS for VFTO.

9. Analyze the PD measurement and UHF Method.

OR

10. Explain SF<sub>6</sub> Gas Decomposition.



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**M.TECH III SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019**

Subject: **Waste to Energy**

Branch/Specialization: Common to **EEE & ME/Electrical Power Systems, Thermal Engineering & Machine Design**

**Time: 3 hours**

**Max. Marks: 70**

**Answer ALL questions of the following**

**5x 14 Marks= 70 Marks**

1. Define Solid waste management (SWM) and explain it in detail with examples.

OR

2. Define hazardous waste and explain the various sources of hazardous wastes.

3. Choose any different types of pyrolysis process and explain it in detail.

OR

4. List the benefits of waste plastic, tire pyrolysis and the application of pyrolysis oil.

5. Explain with neat sketch the biomass - fired combustion system

OR

6. Explain with sketch diagram of circulating fluid bed gasification.

7. Explain about the Fluidized bed combustor with sketch diagram.

OR

8. a) Explain about gasification process in-detail?

[7M]

b) Discuss briefly on environmental benefits of bio-chemical and thermo chemical process

[7M]

9. List out the major properties of biodiesel which are used in diesel engine and explain.

OR

10. Choose any one of the second generation oil and explain its transesterification process for producing Biodiesel.

