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M.Tech. (Electrical Engineering) (2013 Batch E-IV) (Sem.-3)

**LOAD AND ENERGY MANAGEMENT**

Subject Code : MTEE-302C

Paper ID : [74861]

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTION TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

Q1. What are issues related to energy management? What are main Stakeholder involved? Explain their roles.

Q2. What are the criteria for energy forecast? Explain their importance with applications.

Q3. What are the requirements for EEPDS system? How is it implemented?

Q4. What are role of tariff in load management? What are methods used for ensuring a better satisfaction?

Q5. Why Communication control technique is used for load managements in power system? Justify your answer.

Q6. Explain importance of energy model and decision making process. How is it achieved to improve the reliability of power system?

Q7. A city 132 KV substation has 2 transformers each of 10MVA, 132/11KV are run in parallel. Each is having no load = 18KW and load losses 60KW percent impedance= 10.5% no load current is 0.9%. Calculate the losses, power factor at HV bus If load is  $12+j7.2$  MVA.

**Q8. Write short notes on :**

- a) Peak demand forecasting
- b) Communication and coordination in load management
- c) Annual energy forecast
- d) Load demand Characteristics