R09

Code No: C0706

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I – Semester Examinations, March/April-2011
ENERGY AUDITING CONSERVATION AND MANAGEMENT
(ELECTRICAL POWER SYSTEMS)

Time: 3hours **Max. Marks: 60**

Answer any five questions
All questions carry equal marks

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1.a) Define energy audit and explain the steps involved in the control of energy.
b) Discuss the significance of pie-charts, sankey diagrams and load profits with suitable example. [12]

2. Explain energy audit of a process industry and mention the measures to conserve energy with an example. [12]

3.a) Explain the necessary steps in energy management program.
b) Discuss the qualities and functions of energy manager. [12]

4.a) Discuss the points to be considered in the checklist for energy conservation.
b) Describe the technologies for energy conservation. [12]

5.a) Explain the factors affecting the efficiency of a motor.
b) How voltage variation, voltage unbalanced & over motoring effect the performance of an electrical motor? [12]

6.a) Discuss the effect of non-linear loads and harmonics on p.f of a motor.
b) Discuss the steps in the design and practice of energy efficient lighting system. [12]

7.a) Explain the working of wattmeter & data logger.
b) Explain present worth method with suitable example. [12]

8.a) Explain the life cycle costing analysis of an energy efficient lighting system.
b) Explain time value of money and rate of return. [12]

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