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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SECOND SEMESTER M.TECH DEGREE EXAMINATION, MAY 2016

Electrical Engineering

(Power Systems)

04EE6518—Industrial Energy Conservation and Management

Max. Marks : 60   Duration: 3 Hours

PART A

Answer All Questions

Each question carries 3 marks

1. Demonstrate the application of Pareto's Model for energy management with an example.
2. Define process energy. Summarise the principles of process energy management.
3. Explain peak demand control.
4. Discuss energy effectiveness with help of an example.
5. Define specific energy consumption and list out its limitations.
6. How will you determine the energy efficiency of a pump?
7. Briefly explain the considerations of income taxes, depreciation and inflation in investment analysis.
8. Demonstrate life cycle costing approach with an example.

PART B

Each question carries 6 marks

9. Explain in detail the general principles of energy management. Illustrate with suitable example

OR

10. Write short note on evaluating and implementing feasible energy conservation opportunities.
11. Explain the energy management opportunities in lighting system.

OR

12. Illustrate the energy management opportunities in electric heating and electrolytic systems.
13. What are the different applications of computers in energy management?

OR

14. Write a short note on cogeneration.
15. Explain the concept of management of heating and cooling.

OR

16. Illustrate the energy management opportunities in HVAC systems.
17. What are the parameters affecting specific energy consumption?

OR

18. Explain flexi targeting techniques.
19. Illustrate time value of money concept.

OR

20. Explain evaluation of proposals.