

Code: 9A02808

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations June/July 2016

**ENERGY AUDITING & DEMAND SIDE MANAGEMENT**

(Electrical &amp; Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain the principles of energy managements.  
(b) Explain the organizing of energy management program.
- 2 (a) Discuss about the qualities and functions of energy manager.  
(b) Write short notes on:
  - (i) Energy index and Cost index.
  - (ii) Pie-charts.
  - (iii) Load profiles.
- 3 Describe the constructional details and characteristics of energy efficient motor. What are the factors affecting the efficiency of motor? Write merits and demerits of energy efficient motors.
- 4 (a) Discuss the working of power factor controller for single phase motors.  
(b) Write the advantages of power factor improvement.
- 5 (a) Explain the steps in design and practice of energy efficient lighting system.  
(b) Write a short note on Lux meters.  
(c) Write any four applications of PLC's.
- 6 (a) What is depreciation? Explain various depreciation methods in detail.  
(b) Write a short note on time value of money and rate of return.
- 7 (a) Define 'demand side management' and state its features.  
(b) Explain any two DSM techniques in detail.
- 8 (a) Discuss the necessary steps in energy management program.  
(b) Explain the methods of return on investment analysis for energy projects with suitable example.

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