



CBCS SCHEME

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Seventh Semester B.E. Degree Examination, June/July 2024 Electrical Energy Conservation and Auditing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain the following terms with three examples for each:
i) Primary and secondary energy ii) Commercial and Non commercial energy (12 Marks)
iii) Renewable and Non renewable energy (08 Marks)
b. Explain about Green house effect and the Acid rain. (08 Marks)

OR

- 2 a. Explain about energy security. (08 Marks)
b. Explain Energy Conservation Act 2001 with any 6 features. (12 Marks)

Module-2

- 3 a. Explain need for electrical load management and step by step approach for maximum demand control. (12 Marks)
b. Explain the advantages of power factor improvement and cost benefits of PF improvement. (08 Marks)

OR

- 4 a. Explain Soft Starter with its advantages. (06 Marks)
b. Explain Automatic power factor controllers. (06 Marks)
c. Explain any 4 Energy efficient lighting controls (08 Marks)

Module-3

- 5 a. Explain about ten step methodology for detailed audit. (12 Marks)
b. Explain the need for energy audit and types of energy audit. (08 Marks)

OR

- 6 a. Explain any 4 key instruments for energy audit. (08 Marks)
b. Explain energy audit report format in detail. (12 Marks)

Module-4

- 7 a. Explain distinguishing features of electricity as commodity. (12 Marks)
b. Explain four pillar market design. (08 Marks)

OR

- 8 a. Explain with block diagram the mechanism of available based tariff. (12 Marks)
b. Explain in brief about framework of Indian power sector. (08 Marks)

Module-5

- 9 a. Explain about water audit methodology. (08 Marks)
b. Describe any 6 general energy saving tips applicable to new as well as existing building. (06 Marks)
c. Explain the evolution of DSM concept. (06 Marks)

OR

- 10 a. Explain DSM-planning and implementation. (12 Marks)
b. Explain application of load control (any 4) of DSM. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.