

CBCS SCHEME

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15EE653

Sixth Semester B.E. Degree Examination, June/July 2019 Energy Audit and Demand Side Management

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Briefly explain the "Indian Energy Scenario". (08 Marks)
b. Define Energy Audit. Compare preliminary audit, with detailed audit. (08 Marks)

OR

- 2 a. Write stepwise methodology of performing an energy audit. (10 Marks)
b. Describe the methods to carryout flue gas analysis. (06 Marks)

Module-2

- 3 a. Explain the direct and indirect method of calculating efficiency of a boiler. (10 Marks)
b. How can you increase efficiency of fuel fired and electric furnace? (06 Marks)

OR

- 4 a. Explain the method of calculating direct and indirect efficiency of a furnace. (10 Marks)
b. Write the classification of boilers. Explain fire tube boiler, with neat sketch. (06 Marks)

Module-3

- 5 a. What is Electrical Load Management? Explain any four load management techniques. (08 Marks)
b. With neat sketch, explain thermal energy storage based air conditioning system with advantages. (08 Marks)

OR

- 6 a. Mention the types of air conditioning system. Explain the central air conditioning systems. (08 Marks)
b. Why do Technical and Commercial losses occur? Write the methods to reduce technical and commercial losses. (08 Marks)

Module-4

- 7 a. Which are the different losses in electric motor? How they are reduced? (08 Marks)
b. Discuss energy saving opportunities in a lighting system. (08 Marks)

OR

- 8 a. Which are the different lighting systems? Explain Mercury vapour and Metal halide lamp, with a neat sketch. (08 Marks)
b. What is an energy efficient motor? Where they are used? Mention the limitations in adopting energy efficient motor. (08 Marks)

Module-5

- 9 a. Discuss the steps involved in DAM planning and implementation. (08 Marks)
b. Mention the general energy saving tips applicable to new as well as existing buildings. (08 Marks)

OR

- 10 a. What is the role of load management in DSM? Explain the load central techniques. (08 Marks)
b. Explain Energy conservation planning. (08 Marks)

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