H.T.No. | | | | | | | | | | |

**Code No: EE1531** **GEC-R14**

**III B. Tech II Semester Supplementary Examinations, November 2017**

# ENERGY AUDIT, CONSERVATION AND MANAGEMENT

(Open Elective-II)

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

**Note:** All Questions from **PART-A** are to be answered at one place.
Answer any **FOUR** questions from **PART-B.** All Questions carry equal Marks.

## PART-A

**6 × 2 = 12M**

1. Define energy audit and explain its importance.
2. Explain the objective of energy management.
3. What is the role of induction motor in energy management system?
4. What is the function of synchronous condenser?
5. Explain the function of data logger.
6. Define time value of money.

## PART-B

**4 × 12 = 48M**

1. a) Describe types of audit with suitable examples. (7M)
   b) What are the strategies for energy saving in power generation Industry in India? (5M)
2. a) Explain responsibilities and fundamental duties of a manager in an industry. (6M)
   b) What is the strategic approach for energy management? Explain. (6M)
3. a) Explain the constructional features of BLDC motor. (6M)
   b) Describe the characteristics of variable speed drive. (6M)
4. a) Explain various methods of improving power factor. (8M)
   b) Describe static capacitors and explain its significance. (4M)
5. a) Portray the components of lighting system. (6M)
   b) Explain the applications of PLC's and also write its advantages. (6M)
6. a) Describe life cycle costing analysis and discuss its applications. (6M)
   b) A co-generation plant installation is expected to decrease a company's annual energy bill by 43 lakhs. If the capital cost installation of new cogeneration plant is 100 lakhs and operating cost is 6.7 lakhs and the maintenance cost is 4 lakhs. Calculate the expected payback period of the project. (6M)

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