Roll No…….. **Total No. of Printed Pages: 1**

Total No. of Questions: [09]

B. Tech Civil Engg. (Semester – 8th)
ENERGY MANAGEMENT
Subject Code: BELEO-F97
Paper ID: [OE3110704]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) Explain the difference between preliminary and detailed energy audits.
b) Define the term maximum demand.
c) What is the main drawback of simple playback method?
d) What is the energy performance contracting?
e) Define energy management.
f) What are the various factors which affects the motor performance?
g) What do you mean by energy security?
h) What factors affect the choice of lighting?
i) What are energy needs of growing economy?
j) What is the main limitations of cash flows methods?

Section – B **(5 marks each)**

Q2. What is Energy conservation and Explain its importance.
Q3. Define power factor. What are the advantages of power factor improvement?
Q4. What is the need of energy management?
Q5. Explain the role of ESCOs in detail.
Q6. Write a short note on the growth of energy sector in India.

Section – C **(10 marks each)**

Q7. Define energy audit. What is its need? Explain various components of energy audit.
Q8. What is electricity tariff? Explain in detail different types of electricity tariff.
Q9. Discuss in detail financial analysis techniques.