Register Number……

M.E. DEGREE EXAMINATIONS: MAY / JUNE 2010

Second Semester

ENERGY ENGINEERING

EEG505: Energy Conservation and Management

Time: Three Hours **Maximum Marks: 100**

Answer All the Questions:-

PART A (10 x 2 = 20 Marks)

1. Define the following terms with examples: Commercial and Non- commercial energy.
2. Name any three places of oil reserves located in India.
3. Name five designated consumers under the energy conservation act.
4. What is the primary objective of energy audit?
5. Give any two benefits of bench marking energy consumption.
6. Define contract demand and billing demand.
7. Name two cases when steam trap can fail.
8. What are the benefits of a monitoring and targeting system?
9. What do you understand by the term colour rendering index?
10. What are the advantages of simple pay back period?

PART B (5 x 16 = 80 Marks)

11. (a) Explain the Indian energy scenario & energy needs of the Indian economy.

(OR)

(b) Explain the significance of energy conservation. What are the energy efficiency benefits?

12. (a) Discuss the various types of heat losses in boiler.

(OR)

(b) What are the factors affecting the performance and energy efficiency of refrigeration systems. Explain the various energy saving opportunities in the system.

13. (a) Explain the various components of tariff structure in electricity billing.

(OR)

(b) Explain the essential elements of a monitoring and targeting system.

14. (a) What are the good practices in lighting? Explain the methodology of assessing energy efficiency of lighting system.

(OR)

(b) What is the principle of working of a transformer? Explain briefly the losses in transformer and the losses in electrical distribution equipment.

15. (a) Explain the following terms:

(i) Return of investment

(ii) Internal rate of returns

(OR)

(b) What are the various financial analysis techniques available? Explain the simple payback period, its limitations and advantages.

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