Roll No .....

EE/EX - 605

B.E. VI Semester

Examination, June 2015

Energy Conservation and Management

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each questions are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Write about maxi energy audit.
   b) Define energy monitoring.
   c) Write a note on preliminary energy balance.
   d) Explain the different phases of energy audit.

   OR

   Explain the energy performance in detail.

Unit - II

2. a) Define reversible process.
   b) Enlist the devices used for waste heat recovery techniques.
   c) Write a note on entropy and enthalpy.
   d) Explain the energy audit of a refrigeration plant.

   OR

   What are the properties of a lubricant? Explain in detail.

Unit - III

3. a) What is the utilization factor?
   b) Write short note on plant capacity factor.
   c) What is a load duration curve? Explain.
   d) Explain the working of a pumped storage hydro plant.

   OR

   Explain the working of a battery storage system.

Unit - IV

4. a) Explain an electric drive system with block diagram.
   b) Explain the importance of slip in an induction motor.
   c) What are the disadvantages of poor power factor?
   d) Discuss the variable speed electric drive.

   OR

   Discuss the methods to improve power factor of a system.

Unit - V

5. a) Explain the term colour rendering index.
   b) What are the benefits of energy conservation.
   c) Enlist the advantages of co-generation system.
   d) Explain energy conservation process in cement industry.

   OR

   Discuss the energy conservation opportunities in sugar and textile industry.

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