

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.

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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.
