

Roll No

EE/EX-5005 (1) (CBGS)**B.E. V Semester**

Examination, November 2018

Choice Based Grading System (CBGS)**Energy Conservation and Management***Time : Three Hours**Maximum Marks : 70**Note:* i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the aim of Energy Audit? 7
b) Describe the role of energy manager for energy management in an organisation. 7
2. a) Explain Second Law of Thermodynamics and discuss energy conservation in thermal system. 7
b) How energy auditing is done for air conditioning heating and ventilation in a building. 7
3. a) Discuss predictive and preventive maintenance from energy conservation point of view. 7
b) Explain waste heat techniques and Thermal insulation in Thermal system. 7
4. a) Explain the terms related to energy conservation. 7
i) Payback period
ii) Cost benefit

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- b) What is demand side management? How DSM can be achieved by load management? 7
5. Discuss different types of tariffs used for charging the consumers of electric energy. 14
6. a) How energy efficient motors are different than normal motor? 7
b) A single phase 230V, 50Hz motor takes a supply current of 27 amperes at a power factor of 0.6 lagging. The motor p.f. has been improved to 0.9 lagging by connecting a condenser in parallel. Calculate the capacitance of the condenser required. 7
- a) How energy conservation in cement industry can be improved? 7
b) How energy can be conserved in building heating and lighting? 7

Write short notes (Any two) :

2×7=14

- a) Co-generation
- b) Energy economics
- c) Functions of Energy Managers
- d) Waste heat recovery techniques
