

**SUBJECT CODE :- 8289**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**M.E.(Electrical Power System) Examination Nov/Dec 2015**  
**EI-1 Energy Audit & Conservation**  
**(Revised)**

[Time: Three Hours]

[Max. Marks: 80]

“Please check whether you have got the right question paper.”

N.Bi) Solve any two questions from each section.

**Section A**

- Q.1 a) Explain standalone photovoltaic system for AC loads. 10  
 b) Differentiate between Non-conventional energy sources & Renewable energy sources. 10
- Q.2 a) Explain net present value method used for pay back calculations. 10  
 b) Explain fixed & variable concepts of tariff systems. 10
- Q.3 Write a “Detailed Note” on “European agreement” on low voltage electric motor efficiency. 20
- Q.4 Write short notes on energy conservations in 20  
 i) Agriculture sector  
 ii) Industrial sector  
 iii) Domestic sector  
 iv) Commercial sector  
 v) Municipal sector

**Section B**

- Q.5 a) Discuss & explain the areas & possibilities of energy conservation in transmission. 10  
 b) How to calculate” Cost per unit output in energy management? Explain with example. 10
- Q.6 Discuss in details about demand side management & supply side management, their point of considerations, assumption 20  
 required to be made & the reasons for those.
- Q.7 a) Draw the data energy flow diagram & Explain about its components & inter links. 10  
 b) Explain in details “Energy accounting” & its methods. 10
- Q.8 List out the 20  
 i) Equipments &  
 ii) Instruments Used for energy audit and explain the significance of their specifications related to accuracy, precision, Repeatability, Hysteresis, errors, & rounding off methods.