

**DIPLOMA IN ELECTRICAL ENGINEERING
DELVI**

Term-End Examination

December, 2012

BIEE-038 : ENERGY AUDIT

Time : 3 hours

Maximum Marks : 70

*Note : Answer any five questions all carrying equal marks.
Assume suitably any missing data if any. Use of scientific
calculator is permitted.*

1. (a) What are the different energy conservation methods that can be adopted in power plants ? 7+7
(b) Discuss energy crisis a socio-economical aspect.
2. (a) Describe the merits of using steam in industries for energy conversion. 7+7
(b) Mention the types of lamps used in electric lighting system.
3. (a) Find the loading of an immersion heater element to raise 200 litres of water through 80°C in 2 hours. Assume an efficiency of 93%. 7+7
(b) List the strategies for better energy security of the nation.

4. (a) Explain the concept, advantages and limitations of total energy system. 7+7
(b) Explain with a neat sketch various parts of an electric drive along with its advantages.
5. (a) What are fixed and variable costs ? Give an example of a Diesel generator installation. 7+7
(b) What is cost benefit risk analysis? Explain.
6. (a) Define energy audit. Discuss energy management with the help of example. 7+7
(b) Distinguish between preliminary energy audit and detailed energy audit?
7. (a) Write down the steps involved in energy management strategy. 7+7
(b) What are the objectives of energy management ?
8. (a) Explain renewable energy, mention various forms of the same and elaborate on its potential. 7+7
(b) What is clean development mechanism (CDM) ? Explain with example.
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