

**DIPLOMA IN ELECTRICAL ENGINEERING
(DELVI)**

Term-End Examination

June, 2017

00504

BIEE-038 : ENERGY AUDIT

Time : 2 hours

Maximum Marks : 70

*Note : Attempt any **seven** questions. All questions carry equal marks.*

1. (a) What are the various grades of energy ?
(b) Explain the energy scenario of India in detail. 4+6
2. (a) Define the term 'energy efficiency' and also, state the functions of the Bureau of Energy Efficiency. 5
(b) Explain the role of energy efficiency in energy conservation. 5
3. Discuss the various steps in the implementation of energy management in an organisation. 10
4. What is an energy audit ? Explain the difference between preliminary and detailed energy audits. 2+8

5. (a) Explain how the energy content of a product is determined. 4
- (b) "Use of the average cost of electricity for energy analysis calculations leads to the over estimation of savings." Justify. 6
6. Explain the loss variation v/s load of an induction motor. What are the major techniques used by manufacturing industries to improve efficiency of motors ? Explain. 3+7
7. (a) What is the significance of knowing the energy costs ? 4
- (b) Discuss the benefits of benchmarking energy consumption. 6
8. What do you mean by energy conservation ? Describe any two techniques used for energy conservation. 2+8
9. Write short notes on any **two** of the following : $2 \times 5 = 10$
- (a) Objectives of energy management
- (b) Importance of energy policy for industries
- (c) Mathematical tools for energy monitoring and targeting