

**DIPLOMA IN ELECTRICAL ENGINEERING
(DELVI)**

Term-End Examination

December, 2014

01396

BIEE-038 : ENERGY AUDIT

Time : 2 hours

Maximum Marks : 70

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

1. What are the various steps in the implementation of energy management in an organization ? State the importance of energy policy for industries. 7
2. What is the significance of knowing the energy costs ? What are the benefits of benchmarking energy consumption ? 7
3. Explain the steps involved in the force field analysis. Explain how accountabilities can be established at various levels in an energy management system. 7
4. What is performance contracting ? What is the objective of carrying out sensitivity analysis ? 7
5. Calculate the internal rate of return for an economizer that will cost ₹ 5,00,000, will last 10 years and will result in fuel saving of ₹ 1,50,000 each year. 7

6. Explain the difference between gross calorific value (GCV) and net calorific value (NCV) of a fuel. What are the limitations of a simple payback period (SPP)? 7
 7. What is the significance of an energy policy? What general aims and specific targets does it relate to? 7
 8. Explain the objective of a force field analysis. How is such an analysis structured? 7
 9. Classify energy conservation measures in financial terms such as costs and return. List 4 different types of contracts involved in project management. 7
 10. Explain briefly the term 'PERT'. List at least 5 steps involved in CUSUM analysis. 7
 11. Write down the steps involved in "Energy Management Strategy". List the steps involved in detailed energy audit. 7
 12. Give a typical energy audit reporting format. 7
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