

**DIPLOMA IN ELECTRICAL ENGINEERING
(DELVI)****Term-End Examination****December, 2015****BIEE-038 : ENERGY AUDIT***Time : 2 hours**Maximum Marks : 70*

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

1. Mention the conditions for CDM projects. With the help of a flow diagram, explain the CDM projects cycle. 10
2. What kind of Greenhouse Gases are the largest for emission reduction ? Discuss the GHG reduction globally. What is the Kyoto Protocol ? 10
3. Explain the benefits of variable speed drive with respect to throttling of valve for controlling of flow using performance characteristics of pumps. What are the selection criteria for the selection of pump for any application ? 10
4. List the selection criteria for the lighting system. Explain the colour rendering index of lighting system. 10

5. List the various sources of waste heat in high, medium and low temperature range. List the direct and indirect benefits of waste heat recovery. Give different waste heat recovery equipments used in the industry. 10
6. Discuss the need for Environmental Audit for industries. Explain the various steps for pre-audit activities at the industries and its importance. 10
7. Explain the economic benefits of power factor improvement. How can the distribution losses be reduced ? 10
8. How is the pricing of non-renewable energy sources estimated — will it rise or fall ? Explain in detail. What are monopoly and competitive markets in terms of energy policy ? 10
9. Explain in detail the 'air pollution', sources of air pollution and its solutions. What is the effect of 'NO_x', 'HC' and 'CO' on the environment ? 10
10. What is the present installed capacity of electrical power generation in India ? Give the names of the 5 largest power plants and their capacity, fuels used and the state of existence. Define different types of power and its potential. 10