

**DIPLOMA IN ELECTRICAL ENGINEERING
(DELVI)**

00359

Term-End Examination

December, 2017

BIEE-038 : ENERGY AUDIT

Time : 2 hours

Maximum Marks : 70

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

1. (a) Distinguish between Energy intensity and Energy efficacy. 4
(b) Discuss energy distribution between developed and developing countries. 6
2. Explain in detail, why managerial skills are as important as technological skills in energy management. 10
3. What is the utility of energy audit report ? Give an outline of energy audit report format and also suggest ways to make the report more successful in terms of implementation. 2+8=10

4. Give a detailed account of the energy analysis of transportation systems. 10

5. (a) Why do we need Energy Monitoring and Targeting ? Explain with the help of an example. 5

(b) Describe Energy Monitoring and Targeting. 5

6. State the limitations of a simple payback period. In an industry lighting system audit, the following data is reported. Replacement is done of a 40 W incandescent lamp with 29 W CFL lamps.

Total number of lamps used = 422

Duration of use = 8 hours/day

Energy cost = ₹ 5/unit

Determine the payback period of CFL lamps installed if cost of incandescent lamps is ₹ 30/lamp and that of CFL lamps is ₹ 100/lamp.

$4+6=10$

7. Explain different forms of Energy. Also discuss different types of energy strategies for the future. 5+5

8. Discuss the following : 5+5

(a) Energy efficiency management programme

(b) Energy conservation management programme

9. Write short notes on any *two* of the following : $2 \times 5 = 10$

- (a) General guidelines for initiating and implementing an energy management programme
 - (b) Managerial functions involved in energy management
 - (c) Social and economic cost benefit aspects associated with energy analysis
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