

**B.Tech. – VIEP – ELECTRICAL ENGINEERING  
(BTELVI)**

**Term-End Examination**

**00582**

**December, 2017**

**BIEE-026 : ENERGY AUDITING AND ANALYSIS**

*Time : 3 hours*

*Maximum Marks : 70*

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**Note :** *Attempt any ten questions. All questions carry equal marks. Use of scientific calculator is permitted.*

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1. Explain energy conservation in the context of lighting schemes in detail. 7
2. Describe the effect of power-factor improvement in energy conservation. 7
3. What do you mean by energy auditing ? Explain different instruments used for auditing in detail. 7
4. Explain various ECO assessment and evaluation methods. 7

5. How is the electric load analysis for a refrigeration system carried out ? 7
6. Give a detailed energy analysis for compressors. How can energy be conserved in compressors ? 7
7. Explain feeder loss evaluation in detail. 7
8. Describe in detail the co-generation schemes with suitable examples. 7
9. Discuss the importance of input-output curves in energy audit. 7
10. Explain variable speed drives in detail. What are the energy conservation schemes for them ? 7
11. A house is fitted with 25 lamps rated 100 W each, 15 fans consuming 0.5 A each and an electric kettle of resistance 200 ohm. Electricity is supplied at 220 V and electrical energy is sold at ₹ 5 per kWh. Calculate the bill for running the appliances for 8 hours in a day for the month of August. 7

**12. Write short notes on any *two* of the following :**

$$2 \times 3 \frac{1}{2} = 7$$

- (a) Specific Energy Consumption
  - (b) Reactive Power
  - (c) Load Matching in Electric Motors
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