

**B TECH**  
**(SEM VI) THEORY EXAMINATION 2017-18**  
**POWER THEFT AND ENERGY MANAGEMENT**

Time: 3 Hours

Total Marks: 100

**Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt all questions in brief.**

**2 x 10 = 20**

- a. What are the sources of energy?
- b. Explain Menace of power theft.
- c. Explain general principle of power measurement.
- d. Explain global energy crisis.
- e. What do you mean by limit switch?
- f. Explain why electricity is the most convenient form of energy.
- g. Explain energy audit.
- h. Explain DSM planning.
- i. Explain customer acceptance.
- j. What is the future of Indian power sector?

**SECTION B**

**2. Attempt any three of the following:**

**10 x 3 = 30**

- a) Explain the problem of Power Theft in detail. Why people pilfer energy?
- b) Explain how power theft is done in Electromechanical meters by bypassing meter and by insertion of film into meter
- c) Explain general principle of energy measurement and write a detailed note on its planning.
- d) Explain the nation and international Experiences with the DSM.
- e) Explain demand site management strategy its planning and implementation

**SECTION**

**3. Attempt any one part of the following:**

**10 x 1 = 10**

- (a) What do you mean by security seal and tempering in energy meters? How it can helps to prevent power theft?
- (b) What do you mean by electricity loss and harmonics? Explain its national and global scenario.

**4. Attempt any one part of the following:**

**10 x 1 = 10**

- (a) Explain partial earth fault tempering and missing neural method for power theft in the voltage circuit of electromechanical meter.
- (b) Explain power theft in electronic meter by electrostatic discharge meter.

5. **Attempt any one part of the following:** **10 x 1 = 10**
- (a) Explain the energy system and efficiency and the aspects of energy conservation.
  - (b) Explain how the analysis and results of data are prepared for energy audit.
6. **Attempt any one part of the following:** **10 x 1 = 10**
- (a) What do you mean by DSM strategy? Also Explain in detail the scope of demand site management.
  - (b) What is the general principle of lightening system and equipment's used for the lightening?
7. **Attempt any one part of the following:** **10 x 1 = 10**
- (a) Explain the concept of DSM and its evolution.
  - (b) Explain power theft in electronic meter by printed circuit board and frequency circuit tampering.