Sub Code: REE076

Paper Id: | **120726** | **Roll No:** | | | | | | | | | | | | |

B.TECH.
(SEM VII) THEORY EXAMINATION 2019-20
ENERGY EFFICIENCY & CONSERVATION

Time: 3 Hours   *Total Marks: 70*

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

SECTION A

1.   **Attempt *all* questions in brief.**   **2 x 7 = 14**

a.	Give the significance of Energy Conservation in current scenario.
b.	What do you understand by the term energy efficiency?
c.	What do you mean by load scheduling and load shifting?
d.	What is the role of reactive power in electrical energy consumption?
e.	What is need of Demand Side planning?
f.	Give the aim of Energy Audit?
g.	What are the VAR requirements?

SECTION B

2.   **Attempt any *three* of the following:**   **7 x 3 = 21**

a.	Describe the energy efficient windows.
b.	Explain voltage classes and nomenclature.
c.	Write concept and scope of demand side management
d.	Describe the energy audit of Electrical Systems.
e.	Explain the energy conservation in small scale industries.

SECTION C

3.   **Attempt any *one* part of the following:**   **7 x 1 = 7**

(a)	What do you mean by "Energy Conservation Legislation"? Also explain the strategy of energy audit.
(b)	Explain demand side management strategy, its implementation and application

4.   **Attempt any *one* part of the following:**   **7 x 1 = 7**

(a)	Discuss the methods of voltage and reactive power control systems. Also mention its importance in power system environments.
(b)	What is the need of installing capacitor banks and inductor banks in distribution systems? Explain their advantages and limitations.

5.   **Attempt any *one* part of the following:**   **7 x 1 = 7**

(a)	Discuss about the following: 1. Motor efficiency testing, 2. Motor Speed Control
(b)	Write a detailed note on Indian Electricity Act 1956.

6.   **Attempt any *one* part of the following:**   **7 x 1 = 7**

(a)	Explain in detail the voltage instability in power system networks.
(b)	Describe the HVAC and explain the voltage drop calculation.

7.   **Attempt any *one* part of the following:**   **7 x 1 = 7**

(a)	Write short note on Energy efficient motors and compare it with standard motors.
(b)	Explain the following: -1. UPS selection 2. Distribution code and Electricity Bill 2003.