Printed Pages: 4 EEE-054

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 121858 Roll No. | | | | | | | | | |

B.TECH

Theory Examination (Semester-VIII) 2015-16

ENERGY EFFICIENCY & CONSERVATION

Time : 3 Hours *Max. Marks : 100*

Section-A

1. Attempt all parts. All parts carry equal marks. Write answer of each part in sort. (2×10 = 20)

(a) Describe about the protection of capacitors and switching is distribution system.

(b) What do you mean by ENERGY CONSERVATION LEGISLATION?

(c) What do you mean by "LOAD SCHEDULING/SHIFTING"?

(d) What are energy efficient windows?

(e) How the efficiency of the motor is tested?

(f) What is energy conservation planning?

(g) Give a technical note on principle of energy conservation.

(h) Write short note on evaluation of demand side management.

(i) What are the various instruments used for energy audit?

(j) Give the applications of load control.

Section-B

2. Attempt any five questions from this section. (10×5 = 50)

(a) Discuss the principles of energy conservation. Also discuss the energy conservation planning.

(b) Write short note on Energy efficient motors and compare it with standard motors.

(c) Write short notes on the following :

(a) Energy audit of Electrical systems.

(b) Voltage instability in power system networks

(d) Describe in detail about the national and international experiences with Demand Side Management.

(e) Enumerate in detail about energy conservation in electrical generation, transmission and distribution.

(f) Explain the following :

(i) HVAC

(ii) Voltage drop calculations.

(g) Explain the energy conservation in small scale and large scale industries.

(h) Describe the methods of voltage and reactive power control in distribution systems. Also mention its importance in power system environments.

Section-C

Note : Attempt any two questions in this section. (15×2 = 30)

3. Explain the following :-

(i) UPS selection

(ii) Load scheduling/shifting

(iii) Distribution code and Electricity Bill 2003.

4. (a) What do you mean by "CAPACITOR BANKS" and "INDUCTOR BANKS" used in distribution systems? Explain their advantages and limitations.

(b) Write short note on Voltage classes and nomenclatures.

5. (a) Discuss about the following :

(i) Motor efficiency testing

(ii) Motor Speed Control

(b) Write a detailed note on Indian Electricity Act 1956.