Printed Pages : 2

EEE054

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

PAPER ID : 121858

Roll No.

B. Tech.

(SEM. VIII) THEORY EXAMINATION, 2014-15

ENERGY EFFICIENCY & CONSERVATION

Time : 3 Hours] [Total Marks : 100

1 Attempt any FOUR parts : 5×4=20

a) Discuss about the energy conservation planning.

b) Write a note on the concept of demand side management and its scope.

c) Brief note on the voltage control in distribution system.

d) Describe about the protection of capacitors and switching in distribution system.

e) What do you understand from the term load scheduling and shifting ?

f) Give a technical note on principle of energy conservation.

2 Attempt any TWO parts : 10×2=20

a) Enumerate in detail about the energy conservation in electrical generation, transmission and distribution.

b) Illustrate about the energy conservation legislation.

c) State the aim of energy audit and the strategy of energy audit.

3 **Attempt any TWO parts :** **10×2=20**

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

b) State the implementation of Demand Side Management and its application.

c) Narrate the evolution of Demand Side Management in detail.

4 **Attempt any TWO parts :** **10×2=20**

a) Discuss the concept of voltage and reactive power in distribution systems. Explain how the shortage of reactive power in distribution systems is compensated by Static Var Compensators.

b) Write about Capacitor banks and inductor banks used in distribution systems? Explain their advantages and limitations.

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

5 **Attempt any TWO parts :** **10×2=20**

a) Illustrate about the UPS selection, installation operation and maintenance.

b) Discuss about the following:

i. Motor efficiency testing

ii. Motor Speed Control.

c) Write a detailed note on Indian Electricity Act 1956.
