



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

PAPER ID : 121858

Roll No.

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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.