Printed Pages—3 **EEE054**

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

PAPER ID : 2901 **Roll No.** | | | | | | | | | | |

B.Tech.

(SEM. VIII) THEORY EXAMINATION 2011-12

ENERGY EFFICIENCY AND CONSERVATION

Time : 3 Hours *Total Marks : 100*

1. Answer any **two** parts of the following :— **(10×2=20)**

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

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

   (c) What do you mean by "ENERGY CONSERVATION LEGISLATION" ? Also explain the aim of energy audit and strategy of energy audit.

2. Answer any **two** parts of the following :— **(10×2=20)**

   (a) What are the instruments for energy audit ? Also explain the energy audit of electrical systems.

   (b) Write short notes on the following :

      (i) Concept and scope of demand side management

      (ii) Evaluation of demand side management

      (iii) DSM Strategy.

(c) What are the planning of DSM ? Also mention its implementation and applications.

3. Answer any **two** parts of the following :— **(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 are compensated by SVC (Static Var Compensators).

(b) Write short notes on the following :—

(i) Voltage control in distribution systems

(ii) Protection of capacitors and switching in distribution systems.

(c) What do you mean by "CACACITOR BANKS" and "INDVCTOR BANKS" used in distribution systems ? Explain their advantages and limitations.

4. Answer any **two** parts of the following :— **(10×2=20)**

(a) Explain the following :—

(i) Voltage classes and nomenclatures

(ii) Controls for switched capacitors and fields testing.

(b) What do you mean by "VOLTAGE DROP CALCULATIONS" ? Also mention its advantages and significances.

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

5. Answer any **two** parts of the following :— **(10×2=20)**

(a) What do you mean by "LOAD SCHEDULING/ SHIFTING" in systems ? Also mention their advantages and disadvantages.

(b) Explain the following :—

(i) UPS selection

(ii) Speed control of motors (D.C.)

(iii) Distribution code and Electricity Bill 2003.

(c) What do you mean by "Indian Electricity Act 1956" ? Also mention its salient features.