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B.TECH.

THEORY EXAMINATION (SEM–VIII) 2016-17

ENERGY EFFICIENCY & CONSERVATION

Time : 3 Hours *Max. Marks : 100*

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION – A

1. Attempt the following: **10 x 2 = 20**

(a) What is DSM?

(b) What is aim of energy audit?

(c) What is reactive power calculation?

(d) What is HVAC?

(e) What are Planning of DSM.?

(f) What is VAR.?

(g) What is DSM Strategy.?

(h) Define Bank Rating.

(i) What is Indian Electricity act 1956

(j) Write short note on energy Efficiency

SECTION – B

2. Attempt any five parts of the following questions: **5 x 10 = 50**

(a) Explain Efficiency in Motors and Lighting system. Discuss energy efficient motors

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

(c) What do you mean by "voltage drop calculations? Also mention its advantage and significances

(d) Discuss the method of voltage and reactive power control systems. Also mention its importance in power system environments

(e) Explain DSM Strategy ,its implementation and application

(f) Explain Voltage classes and nomenclatures

(g) What are the instruments for energy audit? Also explain the energy audit of electrical system

(h) What do you mean by "ENERGY CONSERVATION LEGISLATION"? Also explain the strategy of energy audit

SECTION – C

Attempt any two parts of the following questions: **2 x 15 = 30**

3 Explain how the shortage of reactive power in distribution system are compensated by SVC(Static Var Compensator).

4 Explain the Capacitors unit , bank rating used in distribution system. Explain their advantages and limitations.

5 Explain the following:-

(i) VAR requirements and power factor

(i) UPS selection

(ii) Indian Electricity Act 1956