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**6th Sem / Branch : Electrical Engg.**  
**Sub.: Electrical Energy Conservation & Management**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The unit of lux is \_\_\_\_\_  
a) 1000 lumens per square feet  
b) 10 lumens per square meter  
c) One lumen per square meter  
d) One lumen per square feet
- Q.2 Pure resistive load in an alternating current (AC) circuit draws only.  
a) Lagging reactive power  
b) Active power  
c) Leading reactive power  
d) Active apparent power
- Q.3 The transformer capacity is rated in terms of  
a) KW                      b) KVA  
c) KVAr                      d) HP
- Q.4 The various types of the instruments, which requires during audit need to be  
a) Easy to Carry              b) Easy to operate  
c) Inexpensive              d) All of the above

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- Q.5 The unit of Solid angle is  
a) Solid angle              b) Radian  
c) Candela              d) Steradian
- Q.6 \_\_\_\_\_ has initiated various promotional provisions in support of energy conservation Act.  
a) BEE  
b) ECBD  
c) Designated consumers  
d) Standard & Labelling
- Q.7 BEE is established on \_\_\_\_\_  
a) 1st March 2001              b) 1st March, 2002  
c) 1st March, 2005              d) 1st March, 2018
- Q.8 Detailed audit is also called \_\_\_\_\_  
a) General Audit              b) Screening audit  
c) Side energy audit              d) Both A & B
- Q.9 The performance of distribution transformer is judged by it's \_\_\_\_\_  
a) Commercial efficiency  
b) All day efficiency  
c) Distribution efficiency  
d) None of the above
- Q.10 What is the voltage output of H<sub>2</sub>O<sub>2</sub> Fuel cell in volt?  
a) -1.23                      b) -1.45  
c) -0.93                      d) -1.01

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### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 NSPH stands for \_\_\_\_\_
- Q.12 BEE stands for \_\_\_\_\_
- Q.13 IN star rating \_\_\_\_\_ point scale is used (Five/Seven)
- Q.14 What do you mean by candle power?
- Q.15 What is skylight?
- Q.16 What is mini audit?
- Q.17 What is sliding scale tariff?
- Q.18 Major part of electric load in any industry consist of \_\_\_\_\_ (Electric Motor/Transformer)
- Q.19 What do you understand by the term domestic sector?
- Q.20 What is the full form of MMC in tariff structure?

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain the effects of low power factor.
- Q.22 What are the general energy saving tips in computers?
- Q.23 What is Energy Efficient motor? What is the need of energy efficient motor?
- Q.24 Write any five difference between standard efficiency motor and Energy Efficiency motor?
- Q.25 Write short notes on LED.
- Q.26 State and explain the law of illumination.

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- Q.27 Explain about electric energy conservation.
- Q.28 Explain any five function of BEE.
- Q.29 What are the base line data that an audit team should collect while conducting detailed energy audit?
- Q.30 What are the objectives of ECBC?
- Q.31 Define star labelling and write any four benefits of star labelling.
- Q.32 What are the general energy saving tips in lightning system? Write any five.
- Q.33 What benefits involved for ECBC?
- Q.34 What is the importance of leakage test in compressed air system?
- Q.35 What is CFL? State their advantages and disadvantages.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 What is tariff? Explain different types of tariff in details.
- Q.37 Discuss the various type of losses that occurs in standard motors. How you can reduce these losses using energy efficient motors.
- Q.38 What is need of energy efficiency in lighting system? What are the main source of energy efficient lighting?

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