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

Time : 3Hrs.

M.M. : 100

**SECTION-A**

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

- Q.1 Carbon arc lamp are commonly used in (CO1)  
a) Domestic Lighting  
b) Cinema Projector  
c) Street  
d) Photography
- Q.2 The unit of Solid angle is (CO1)  
a) Solid angle                      b) Radian  
c) Steradian                      d) Candela
- Q.3 The unit of luminous flux is (CO1)  
a) Steradian                      b) Candela  
c) Lumen                      d) Lux
- Q.4 BEE is established on (CO7)  
a) 1st March 2001                      b) 1st March 2002  
c) 1st March 2005                      d) 1st March 2018
- Q.5 Which of the following is important feature of energy conservation Act. (CO7)  
a) Standard & labeling

- b) Designated consumers  
c) Energy conservation building code  
d) All of above

- Q.6 Technical losses in the secondary distribution system. (CO4)  
a) Lack of administration  
b) Due to unbalance load  
c) Copper Losses  
d) Both A & B
- Q.7 What is the voltage output of H<sub>2</sub>-O<sub>2</sub> Fuel cell in volt? (CO5)  
a) -1.23                      b) -1.45  
c) -1.01                      d) -0.93
- Q.8 Fuel cell are free from vibration, heat transfer and thermal pollution. (CO5)  
a) True                      b) False
- Q.9 \_\_\_\_\_ has been formulated by Bureau of energy efficient. (CO7)  
a) Star labelling program  
b) Computer program  
c) Ranking program  
d) None of above
- Q.10 BEE is under of ministry of \_\_\_\_\_ (CO4)  
a) Health                      b) Defence  
c) Power                      d) All of the above

### SECTION-B

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

- Q.11 Illumination on the surface is \_\_\_\_\_ proportional to cosine of angle between angle normal to the surface (Directly/Inversely) (CO1)
- Q.12 Define efficiency of a light source. (CO1)
- Q.13 In star rating \_\_\_\_ Point scale is used (Five/Seven) (Co2)
- Q.14 Rating plan one formulated remains in force for \_\_\_\_ period of three year (Minimum/Maximum) (CO2)
- Q.15 Synergy meter is used to measure \_\_\_\_\_. (CO4)
- Q.16 Performance of distribution transformers is judged by its \_\_\_\_\_ (Commercial efficiency/All day efficiency) (CO4)
- Q.17 Major part of electric load in any industry consists of \_\_\_\_\_ (Electric Motors/Transformers). (CO4)
- Q.18 HVAC stand for \_\_\_\_\_. (CO6)
- Q.19 Output of HVAC system is measured in \_\_\_\_\_. (CO4)
- Q.20 AAHEPI stands for \_\_\_\_\_. (CO6)

### SECTION-C

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

- Q.21 Define candle power. (CO1)

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- Q.22 What is flood lighting. (CO1)
- Q.23 Define Rating plan. (CO2)
- Q.24 What is Mini Audit? (CO3)
- Q.25 What is Salvage Value? (CO4)
- Q.26 What is standby Power Consumption. (CO5)
- Q.27 Define diversity factor. (CO2)
- Q.28 What is net positive Suction Head. (CO5)
- Q.29 What is Phantom load. (CO4)
- Q.30 Define Thermal resistance of building. (CO7)
- Q.31 What is a Skylight? (CO6)
- Q.32 What is CFL? State their merit and Demerit. (CO1)
- Q.33 List of activities involved in preliminary Audit. (Co3)
- Q.34 Discuss the effect of power factor variation on the efficiency of transformer. (CO4)
- Q.35 What are condition for the display of labels. (CO2)

### SECTION-D

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

- Q.36 Discuss various losses that occurs in standard Motors. How these losses are reduced in energy efficiency motors? (CO4)
- Q.37 Discuss the need of energy efficiency in lighting system. (CO1)
- Q.38 What are energy saving opportunities in refrigeration and air conditioning plant. (CO5)

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