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6th Sem / Elect.
Subject:- Electrical Energy Conservation and Management

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 The objective of energy management is_____ (CO2)
a) Minimizing energy costs
b) maximizing waste
c) increasing environmental degradation
d) All of the above

Q.2 All lamps are rated in_____. (CO1)
a) Volts b) watts
c) Ampere d) Both (a) & (b)

Q.3 If the power input of the system is 80W and power output is 60W. What will be efficiency of the system. (CO5)
a) 0.25 b) 0.5
c) 0.75 d) 0.70

Q.4 Magnetic core losses arises due to (CO4)
a) Eddy currents b) Hysteresis losses
c) Magnetic saturation d) All of these

Q.5 CFL stands for_____ (CO1)
a) Compact fluorescent lamp
b) constantan filament lamp
c) closed filament lamp
d) closed fluorescent lamp

Q.6 The transformer capacity is rated in terms of (CO6)
a) KW b) KVA
c) KVAR d) HP

Q.7 Power factor is the ratio of (CO5)
a) KW/KVA b) KVA/KW
c) KVAR/KW d) KVAR/KVA

Q.8 Energy audit instrument used for power measurement is _____ (CO3)
a) Luxmeter b) Voltmeter
c) Power analyzer d) None of the above

Q.9 The transfer of energy from one form to another is called law of_____ (CO2)
a) Expansion b) Conversion
c) Conservation d) None of the above

Q.10 One Ton of refrigeration (TR) is equal to (CO6)
a) 3.51 KW b) 3024 Kcal/hr
c) 12000 BTU / hr d) all of the above

SECTION-B

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

Q.11 LED lamps use_____ energy than a CFL. (CO1)

Q.12 Luminous flux is measured in_____. (CO1)

Q.13 Static capacitors are used to_____. (CO5)

Q.14 In star rating_____ point scale is used. (Five /Seven) (CO6)

Q.15 What is skylight? (CO3)

Q.16 Coal and petroleum are_____ sources of energy. (CO2)

Q.17 Define the term energy efficiency. (CO5)

Q.18 Full form of ECM's _____ (CO4)

Q.19 More is the stars, more_____ is the appliance. (CO6)

Q.20 The efficiency of energy conversion processes is less than one. (True/False) (CO2)

SECTION-C

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

Q.21 What are Renewable Energy Sources? Name different types of these sources. (CO2)

Q.22 What is the significance of energy efficiency. (CO2)

Q.23 Explain the different areas of energy conservation in agriculture sector. (CO4)

Q.24 Write a short note on energy efficient lighting sources and their benefits. (CO6)

Q.25 What are the objectives of ECBC? (CO7)

Q.26 Which aspect we have to consider while designing energy efficient motor? (CO4)

Q.27 Write short note on CFL. (CO1)

Q.28 What is power factor? How we can correct power factor? (CO5)

Q.29 What do you mean by energy audit? (CO3)

Q.30 List the steps to reduce the losses in power distribution. (CO4)

Q.31 What are the energy saving tips in pumps? (CO5)

Q.32 Describe the efficiency of an energy conversion process in words and with an equation. (CO2)

Q.33 What is LED? Mention its advantages and disadvantages. (CO1)

Q.34 What are the different types of fuel? (CO5)

Q.35 What are the energy saving opportunities in Refrigeration systems? (CO6)

SECTION-D

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

Q.36 What is Tariff? What are the objectives of tariff? Explain different types of tariff in details. (CO5)

Q.37 What is the need of energy efficiency in lighting system? What are the main sources of energy efficient lighting? (CO4)

Q.38 a) List at least five energy saving tips in Computers. (CO3,6)

b) Explain the duties of energy auditors and energy manager.