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Roll No.

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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 unit of illumination is _____
a) lux b) luminaire
c) Lumens d) None of above
- Q.2 Sodium vapour lamp are not used in indoor application because they
a) Have poor energy efficiency
b) Have poor colour rendering index
c) Occupy a plenty of space
d) Have low lumens output
- Q.3 The ratio of overall maximum demand of the plant to the sum of individual maximum demand of various equipment is _____
a) Load factor b) demand factor
c) diversity factor d) Maximum demand
- Q.4 Lower power factor of DG set demands _____
a) Higher excitation current
b) Lower excitation current
c) No change in excitation
d) None of the above

- Q.5 Which of the following is not included in the objectives of BIS?
a) Market involvement of firms
b) Standardization
c) Marking
d) Quality certification
- Q.6 Standard efficient motor can be replaced by energy efficient motor to reduce _____
a) Initial cost b) running cost
c) Capital cost d) Life cycle cost
- Q.7 The voltage drop in transmission and distribution line depends on
a) Reactance and resistance
b) Current in the line
c) Length of the line
d) All of the above
- Q.8 Maximum demand controller is used to
a) Switch-off non essential load
b) Switch off essential load
c) Controls the power factor of plant
d) All of the above
- Q.9 The refrigerant used in vapour absorption system is
a) Steam b) Pure water
c) Freon d) Lithium bromide
- Q.10 The efficiency of a pump does not depends on
a) Suction load b) Discharge head
c) Density of fluid d) Motor efficiency

(1)

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(2)

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SECTION-B

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

Q.11 1 MJ = _____ KWH

Q.12 The installed capacity of the plant is generally _____ than the maximum demand on the plant.

Q.13 The ratio of actual energy produce to the maximum possible energy that could have been produced during a period is called _____ (Plant capacity factor/diversity factor)

Q.14 The full form of ECBC is _____

Q.15 In Haryana, ECBC was Implemented in (2016/2017)

Q.16 Load factor is always _____ than one. (Less/More)

Q.17 _____ lamp is the least expensive to buy but are the most expensive to operate (Incandescent lamp/LED)

Q.18 Define transformer loading.

Q.19 What are the different type of electrical power supply system?

Q.20 What is tariff?

SECTION-C

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

Q.21 Explain any five difference between filament lamp and Fluorescent tubes.

Q.22 Define energy management and what are its objectives?

Q.23 Explain the difference between walk through audit and detailed audit.

Q.24 What is the effect of efficiency of three phase I.M. when voltage wave form is different from sinusoidal.

Q.25 What are the feature of energy efficient motor?

Q.26 Draw the single line diagram of Electrical supply system and explain it.

Q.27 Explain the advantages of power factor improvement.

Q.28 What are benefits involved for ECBC?

Q.29 What is fuel and explain the properties of ideal fuel.

Q.30 What are the objectives of ECBC.

Q.31 Explain the Suction load, Maximum demand and Contract demand?

Q.32 What are the energy saving tips in room air conditioners?

Q.33 Why variable torque load offers Greatest energy saving? Explain electronics method of speed control.

Q.34 Explain the energy audit procedure by flow chart.

Q.35 What is LED? Explain its working principle.

SECTION-D

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

Q.36 What is BEE star rating? Explain how to decide BEE star rating.

Q.37 What are energy saving opportunities in a compressed air system.

Q.38 What aspects are required to be considered while designing energy efficient motors?