

- Q.27 Define the terms (CO6)
 1) Form factor 2) Peak factor
- Q.28 Explain hysteresis loss. (CO4)
- Q.29 Derive an expression for energy stored in magnetic field. (CO4)
- Q.30 Describe the term self inductance & mutual inductance. (CO5)
- Q.31 Why use sinusoidal alternating quantities? (CO6)
- Q.32 Explain sinusoidal quantities can be represent by vector. (CO6)
- Q.33 Describe power in three phase circuit. (CO8)
- Q.34 State & explain power factor. Explain its practical significance. (CO7)
- Q.35 Differentiate between magnetic & electric circuits. (CO4)

SECTION-D

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

- Q.36 Write short note on (CO2)
 1. Maximum power transfer theorem
 2. Ohm's Law
- Q.37 State & explain (CO4)
 1. Fleming's right hand rule
 2. Faraday's first law
- Q.38 Describe with mathematical expression power consumed in an RLC series circuit. (CO7)

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Roll No.

3rd Sem / Electrical, GE, Power Station Engg, Elect. & Eltx. Engg.

Subject:- Fundamentals of Electrical Engineering

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 A current is set to be alternating when it changes its _____. (CO6)
 a) Magnitude only
 b) Direction only
 c) Both magnitude and direction
 d) None
- Q.2 Unit of reactive power is _____. (CO7)
 a) VA b) watt
 c) VAR d) ohm
- Q.3 In a purely inductive circuit _____. (CO7)
 a) Actual power is zero
 b) Reactive power is zero
 c) Apparent power is zero
 d) None
- Q.4 The voltage of domestic supply is 220 V. The figure represents _____. (CO6)

- a) Mean value b) r.m.s. value
c) Peak value d) Average value
- Q.5 Power factor of an electrical circuit is equal to _____
(CO7)
- a) R/Z
b) Cosine of phase angle between current and voltage
c) True power / Apparent power
d) All above
- Q.6 During charging the specific gravity of the electrolyte of a lead acid battery _____ (CO3)
- a) Increases b) Decreases
c) Remains the same d) Becomes zero
- Q.7 The lead acid cell never be discharged beyond _____
(CO3)
- a) 1.8 V b) 1.9 V
c) 2 V d) 2.1 V
- Q.8 MMF is analogous to _____ (CO4)
- a) Emf b) current
c) Resistance d) none
- Q.9 The maximum value of power factor is _____ (CO7)
- a) 0 b) 1
c) 2 d) none of these
- Q.10 The unit of Self inductance is _____ (CO5)
- a) Henry b) volt
c) Watt d) none of these

SECTION-B

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

- Q.11 Name two types of electricity. (CO1)
- Q.12 Define resistance. (CO1)
- Q.13 For battery charging _____ supply is required (CO3)
- Q.14 To check the specific gravity of electrolyte, the instrument used is _____. (CO3)
- Q.15 Define magnetic field. (CO4)
- Q.16 Unit of electrical current is _____. (CO1)
- Q.17 Expand R.M.S value _____. (CO6)
- Q.18 Capacity of battery is measured in _____. (CO3)
- Q.19 Define phase. (CO6)
- Q.20 Unit of MMF is _____. (CO4)

SECTION-C

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

- Q.21 Give the advantages of AC over DC. (CO6)
- Q.22 State & explain kirchoff's Current Law. (CO2)
- Q.23 Explain star to delta transformation. (CO8)
- Q.24 Describe the construction of Lead Acid battery. (CO3)
- Q.25 Illustrate about the charging methods of Lead Acid Battery. (CO3)
- Q.26 Describe application of electrical energy. (CO1)