

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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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)