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1st Sem. / Electrical
Subject : Principles of Electrical Engineering

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Unit of current is (CO1)
a) Farad b) Volts
c) Ampere d) Coulomb

Q.2 Unit of Capacitance is (CO1)
a) Farad b) Coulomb
c) Volt d) Ohm

Q.3 Power is measured by (CO1)
a) Ammeter b) Wattmeter
c) Energy meter d) Voltmeter

Q.4 An ideal current source has internal resistance (CO2)
a) Zero b) One
c) Two d) Infinity

Q.5 Unit of M.M.F is (CO3)
a) Ampere b) Ampere turns
c) Farad d) Joule

Q.6 In Lead acid cell the Negative plate is made of (CO5)
a) Lead oxide b) Iron
c) Zinc d) Lead

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Unit of Energy is (CO1)

Q.8 Property which opposes flow of electric current in a conductor is called_____ (CO1)

Q.9 Unit of Flux is_____. (CO3)

Q.10 As the frequency increases, Eddy current loss Increases/ Decreases. (CO4)

Q.11 Two parallel current carrying conductors experience _____. (CO3)

Q.12 Capacity of Battery is in Ampere X_____.(CO5)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain the factors affecting Capacitance of a capacitor. (CO1)

Q.14 State and explain Ohm's Law. (CO2)

Q.15 Two resistance of 3 Ω and 6Ω are first connected in series and then in parallel. Find the total Resistance in each case. (CO2)

Q.16 Define and explain Kirchoff's voltage law. (CO2)

Q.17 Explain similarity between Electric circuit & Magnetic circuit. (CO3)

Q.18 Explain the concept of self Inductance. (CO4)

Q.19 Explain various methods of charging of lead Acid battery. (CO5)

Q.20 Three Resistance of 6Ω, 12Ω and 18Ω are connected in Delta. Convert it into equivalent Star.

Q.21 Derive the expression for Energy stored in an Inductor. (CO4)

Q.22 Explain effect of Temperature on the Resistance of Conductor. (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain construction, Working principle and applications of Lead Acid Battery or Lithium ion Battery. (CO5)

Q.24 Explain Concept of voltage source, current source, connections and their conversions. (CO2)

Q.25 Write short note on any two.

a) Hysteresis Loss (CO4)

b) Kirchhoff's current Law (CO2)

c) Capacitors in Series and Parallel. (CO1)