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NEP / 1st Sem. / ECE

Subject : Fundamentals of Electrical Engg

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) Volts b) Ampere

c) Ohm d) Watt

Q.2 Watt meter is used for measuring (CO1)

a) Energy b) Current

c) Voltage d) Power

Q.3 An Ideal voltage source has internal Resistance (CO2)

a) Zero b) One

c) Infinity d) Two

Q.4 Unit of Impedance is (CO3)

a) Ampere b) Ohm

c) Watt d) Second

Q.5 Unit of Flux is (CO4)

a) Ohm b) Webes

c) Coulomb d) Farad

Q.6 In Lead Acid cell Positive plate is made of (CO5)

a) Lead b) Lead oxide

c) Copper d) Lead sulphate

SECTION-B

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

Q.7 Unit of voltage is_____. (CO1)

Q.8 Unit of Resistance is _____. (CO1)

Q.9 In KCL Algebraic sum of currents meeting at a point = _____. (CO2)

Q.10 Unit of Frequency is_____. (CO3)

Q.11 Maximum value of Power factor is _____.(CO3)

Q.12 Unit of M.M.F. is_____. (CO4)

SECTION-C

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

Q.13 Two Resistors of 3Ω and 6Ω are first connected in series and then in parallel. Find the total equivalent resistance in each case. (CO1)

Q.14 Explain effect of temperature on the Resistance of a conductor. (CO2)

Q.15 Explain KCL and KVL (CO2)

Q.16 Define and explain Ohm's Law. (CO2)

Q.17 Define Maximum Power Transfer theorem. (CO2)

Q.18 Explain series and parallel connection of Inductors. (CO4)

Q.19 Define and explain R.M.S. value of A.C. (CO3)

Q.20 Draw and explain Independence Triangle in R-L series circuit. (CO3)

Q.21 Derive the formula for power in pure Resistance (CO3)

Q.22 Explain the Reactions that take place at Anode & Cathode during charging in lead acid cell. (CO5)

SECTION-D

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

Q.23 Define and explain Thevenin Theorem and Norton Theorm. (CO2)

Q.24 Compare Electric circuit and Magnetic circuit. (CO4)

Q.25 Explain construction, working principle and applications of Lead Acid cell. (Co5)