Q.30 What is difference between AC and DC? (CO-6)

Q.31 Explain the vector representation of alternating quantities. (CO-6)

Q.32 Explain the concept of susceptance and admittance. (CO-7)

Q.33 Explain active and reactive components of current and its significance. (CO-7)

Q.34 Write advantages of 3 phase over single phase. (CO-8)

Q.35 Explain power in 3 phase circuits. (CO-8)

SECTION-D

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

Q.36 Explain working principle and applications of Nickle Cadium Cell. (CO-3)

Q.37 Explain "energy stored in a magnetic field." (CO-5)

Q.38 Give expression of impedance, phase angle, power factor of single-phase ac supply delivering to RLC series circuit. (CO-7)

Note : Course Outcome (CO) mentioned in the question paper is for official purpose only.

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Roll No. .....

Branch : 2nd Sem Elect/Elect. & Eltx Engg/Fire Tech & Safety

Subject : Fundamental of electrical engineering

Time : 3 Hrs. M.M. : 100

SECTION-A

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

Q.1 The shape of AC is (CO-1)

a) Straight horizontal Line
b) Square wave
c) Sine wave
d) Triangular wave

Q.2 In India, frequency of DC supply is (CO-1)

a) 0 b) 50
c) 100 d) 230

Q.3 Equivalent resistance of two resistance 10 ohm each in series in (CO-2)

a) 0 b) 5
c) 10 d) 20

Q.4 In a primary cell, chemical reactions taking place are (CO-3)

a) Reversible b) Irreversible
c) Both d) None of above

Q.5 Average emf of lead acid cell is (CO-3)

a) 1.0 V b) 1.2 V

c) 1.8 V d) 2.0 V

Q.6 The Hysteresis loss is caused by (CO-4)

a) Structural non-homogeneity

b) Work required for the magnetising the material

c) Potential work function

d) None of above.

Q.7 The property of coil by which a counter e.m.f. is induced in it when the current through the coil changes is known as (CO-5)

a) Self inductance b) Mutual inductance

c) Conductance d) Admittance

Q.8 The power factor at resonance in R-L-C- parallel circuit is (CO-6)

a) 0 b) 0.8 lagging

c) 0.8 leading d) Unity

Q.9 In a three-phase system, the voltages are separated by (CO-8)

a) 45^0 b) 90^0

c) 120^0 d) 180^0

Q.10 Eddy current will depend upon (CO-5)

a) Frequency b) Flux density

c) Thickness d) All of above

SECTION-B

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

Q.11 Define Ac. (CO-1)

Q.12 Define Charge. (CO-1)

Q.13 Define e.m.f. (CO-2)

Q.14 Define Cell. (CO-3)

Q.15 Define hysteresis loop. (CO-4)

Q.16 Define mutual induction. (CO-5)

Q.17 Define rms value (CO-6)

Q.18 Define phase difference. (CO-6)

Q.19 Define conductance (CO-7)

Q.20 What is star connection (CO-8)

SECTION-C

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

Q.21 What are the advantages of electrical energy?(CO-1)

Q.22 Explain Ohm's Law. Explain resistance in series. (CO-2)

Q.23 Explain Kirchhoff's first law. (CO-2)

Q.24 How care and maintenance of lead acid battery done? (CO-3)

Q.25 What are charging methods used for lead acid accumulator. (CO-3)

Q.26 Write a short note on "Magnetic field across straight current carrying conductor." (CO-4)

Q.27 What is force between two parallel current carrying conductors? (CO-4)

Q.28 Explain Lenz's law. (CO-5)

Q.29 Explain the concept of eddy currents and eddy current losses. (CO-5)