2nd Sem / Electrical

Subject : Electrical Networks

Time : 3 Hrs.   M.M. : 60

SECTION-A

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

Q.1   The unit of Frequency is   (CO2)

a)   Hertz   b)   Seconds

c)   Metre   d)   Ampere

Q.2   The maximum value of Power factor is   (CO3)

a)   1   b)   -1

c)   0   d)   2

Q.3   The unit of impedance is   (CO3)

a)   ohms   b)   volts

c)   hertz   d)   mho

Q.4   At time of series resonance value of Z is   (CO4)

a)   Maximum   b)   Minimum

c)   Zero   d)   Negative

Q.5   In Star connection line current is equal to   (CO5)

a)   Zero   b)   Phase current

c)   Maximum   d)   Neutral

Q.6   The unit of Admittance is   (CO3)

a)   Mho   b)   volt

c)   ampere   d)   ohm

SECTION-B

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

Q.7   Define alternation   (CO2)

Q.8   Unit of Time Period is_____   (CO2)

Q.9   When AC is applied to pure inductance, current lags the voltage by phase angle of_____   (CO3)

Q.10   What is the full form of Q-factor?   (CO4)

Q.11 Define waveform. (CO2)

Q.12 Maximum power is delivered to load resistance when load resistance is equal to_____. (CO4)

SECTION-C

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

Q.13 Define and Explain Super Position Theorem. (CO5)

Q.14 Define Thevenin Therorem. (CO5)

Q.15 Define and explain R.M.S. value of A.C. (CO2)

Q.16 Explain difference between AC & DC (CO2)

Q.17 Explain maximum power Transfer Theorem. (CO3)

Q.18 Explain Impedance Triangle for R-L Series circuit. (CO3)

Q.19 Draw and explain Star connection with relationship between line and phase quantities. (CO5)

Q.20 Draw proper triangle for R-L series circuit. (CO4)

Q.21 Define Form Factor and Peak Factor. (CO2)

Q.22 Explain differences between active and passive network. (CO1)

SECTION-D

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

Q.23 Derive and Explain conditions for Series Resonance with graphs. (CO4)

Q.24 Explain Power factor, its significance, disadvantages and methods to improve it. (CO3)

Q.25 Derive and Explain generation of alternating E.M.F.

$E = E_m \sin q$ (CO5)