EEE 2023 *(previous question's short overview)*

Definition type

DC	AC
Ohm's law (with explanation) superposition theorem circuit short circuit open circuit magnetic current magnetic hysteresis self and mutual inductance resistance dependent source	Instantaneous power RMS value form factor power factor phasor diagram resonance conductivity parameters active network mesh imaginary value

Short discussion type

DC	AC
Maximum power theorem Thevenin's theorem Norton's theorem loop basic laws of electrical engineering properties of series and parallel current KVL and KCL laws of resistance reciprocity theorem	Effects of temperature on resistance V-I characteristics of non-linear circuit bilateral circuit unilateral circuit positive network non-linear circuit alternating current voltage (pure C) magnetic force laws magnetic hysteresis hysteresis loop of a magnetic material importance of hysteresis loop Faraday's laws of electromagnetic induction bandwidth of a series resonance circuit true and reactive power by power triangle why effective value is used in AC right hand rule for the conductor "phenomena of force production between 2 parallel conductors for same and opposite current direction" magnetic and electric circuit comparison Flerning's right handrule for induced current resonance in R-L-C effective value of alternating current effects of series resonance bandwidth of a series resonance circuit

Prove type

DC	AC
Mesh analysis (matrix form) Maximum power theorem	Effective wave for sinusoid wave resonance in R-L-C RMS of sin. Voltage equations (I and V) for pure C equations (I and V) for R-C RMS for a sin. Current RMS and avg. value for half sine wave

Legends
sin. = sinusoidal

one line per questions *
multiple lines are merged with “”