

QUIZ 4

Basic Electronics - ECE113

Duration: 30 mins

Marks: 30

Date: 18/07/2022 Time: 4.45 - 5.15 pm

Q.1 A coil of resistance $5\ \Omega$ and inductance 120 mH in series with a $100\ \mu\text{F}$ capacitor is connected to a 600 V, 50 Hz supply. Calculate (a) the current drawn from the supply (b) the phase difference between the supply voltage and current, (c) the voltage across the coil and (d) the voltage across the capacitor.

[4x5 = 20 Marks]

Q.2 A pure inductance of 300 mH is connected in parallel with a $20\ \mu\text{F}$ capacitor across a 100 V, variable frequency supply. Determine (a) the resonant frequency of the circuit and (b) the current circulating in the capacitor and inductance at resonance.

[2x5 = 10 Marks]