

Date: 5/6/2020

Name: Sneha.G

Course: Network Theory

USN: 4AL18EC050

Topic: • Series RLC circuit

• Parallel RLC circuit

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Report:

→ Series RLC circuit:

- How series Resonance occurs in passive RLC series circuits & their use in RLC filter
- For Resonance to occur in any circuit it must have at least one inductor & one capacitor
- Resonance is the result of oscillations in a circuit as stored is passed from the inductor to the capacitor
- Resonance occurs when $X_L = X_C$ & the imaginary part of the transfer function is zero
- At resonance the impedance of the circuit is equal to the resistance value as $Z = R$
- At low frequencies the series circuit is capacitive $X_C > X_L$

→ Parallel RLC circuit:

- In a parallel RLC circuit containing a resistor, an inductor & a capacitor the circuit current is the phasor sum made up of three components
- Since the supply voltage is common to all three components it is used as the horizontal reference when constructing a current triangle

DATE:

- Admittance is the reciprocal of impedance
- The impedance is a complex quantity consisting of a real part & an imaginary part
- The real part is the reciprocal of resistance is called Conductance $[G]$
- The imaginary part is the reciprocal of reactance called Susceptance $[B]$
- If we vary the frequency across the circuits there must become a point where $X_C = X_L$
- The frequency points at which this occurs is called resonance.

⇒ RL & RC Series

Series circuit	Parallel circuit
Voltage, (V)	current (I)
Resistance (R)	Conductance (G)
Reactance (X)	Susceptance (B)
Impedance (Z)	Admittance

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Afternoon Session

Date: 6/5/2020

Course: Python

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Report:

⇒ Building a Geocoder Web service.

- Overview of output
- Solution - Part 1
- Solution - Part 2

Basically, It is a project-based topic where in output of the project is briefed.