Name	Tags	Question Description
19BT20241	Easy	The algebraic sum of the powers in a circuit is equal to zero ***Ans:Kirchoff's Voltage Law and Conservation Of Energy***
19BT20241	Easy	Identify which of the following element is a non-linear device **Ans: If you find any of the below one's it could be the answer..** **Diode, transistors, vacuum tubes, iron core inductors, transformers, other semiconductor devices.**
19BT20241	Easy	If the capacitances 20F, 20F are in series, find the equivalent capacitance_____ ***Ans: 10F***
19BT20241	Easy	In a linear network consisting of resistors and ideal voltage source, if the value of resistors are doubled, then voltage across each resistor ***Ans: No Change***
19BT20241	Easy	Which of the following is true about an ideal Current source? **Ans: These are the properties of an ideal current source** **1. Provides constant current with 100% efficiency** **2. Has infinite internal resistance** 3. **Is independent of the voltage across it and if two ends are not connected to an external circuit the potential difference across it would be infinite.**
19BT20241	Easy	A voltage source having a voltage of 100 V and internal resistance of 10Ω is equivalent to a current source of **Ans: Is equivalent to a current source of 10A with a resistance of 10Ω connected in parallel to it.**
19BT20241	Easy	Constant current source is a_____ ***Ans: A constant current source is a power source which provides a constant current to a load, even despite changes and variance in load resistance. In other words, the current which a constant current source provides is steady, even if the resistance of the load varies.***
19BT20241	Easy	If a resistor R_x is connected between nodes X and Y, R_y between X and Z, R_z between Y and Z to form a delta connection, then after transformation to star, the resistor at node Y is? **Ans: According to the question this is the result $((R_x \times R_z)/(R_x + R_y + R_z))$. But there might be a typo in the question, So verify before answering.**
19BT20241	Easy	Identify the law which is going to place a vital role in loop analysis
19BT20241	Easy	Identify the units for conductance ***Ans: Seimens,mho,ohm^{-1}***
19BT20241	Easy	What is the phase angle between the voltage and current in case of capacitor and mention which one is lagging **Ans: Phase angle b/w voltage and current is 90^o and voltage is lagging**
19BT20241	Easy	What is the value of (4+3i)-(2+2i) ***Ans: 2+i***
19BT20241	Easy	Kirchhoff's law is not applicable to circuits with____ ***Ans: Distributed parameters***
19BT20241	Easy	An electric heater draws 10 A from a 120-V line. The resistance of the heater is: **Ans: 12 Ω**
19BT20241	Easy	The number of branches b, number of nodes n, and the number of independent loops l in a network are related as:

		Ans: l = b – n + 1
19BT20241	Easy	A series RLC circuit has R=30Ω, X_C=50Ω, and X_L=90Ω. The impedance of the circuit is: **Ans: 563.1Ω**
19BT20241	Easy	The Voltage across a capacitor leads the current through it by 90^0.
19BT20241	Easy	The imaginary part of impedance is called: ***Ans: Reactance***
19BT20241	Easy	A function that repeats itself after fixed intervals is said to be: ***Ans: Periodic Function***
19BT20241	Easy	The impedance of a capacitor increases with increase in frequency. ***Ans:False***
19BT20241	Moderate	If v_1=30 sin ($\omega t+10^0$) and v_2=20 sin ($\omega t+50^0$). Which of the following statement is true?
19BT20241	Easy	Indicate the units for reactive power ***Ans: Volt Amphere Reactive***
19BT20241	Easy	The product of rms values of current and voltage is called as ***Ans: Apparent Power***
19BT20241	Easy	The root mean square value of the voltage is **Ans: ($V_o/\sqrt{2}$), or, equivalently, $0.707V_o$**
19BT20241	Easy	The ratio of peak value to the rms value is called as **Ans: Also known as the "equivalent" or "DC equivalent" value of an ACvoltage or current. For a sine wave, the RMS value is approximately 0.707 of its peak value. The crest factor of an AC waveform is the ratio of its peak(crest) to its RMS value.**
19BT20241	Easy	What is the phase angle between voltage and current in case of resistor ***Ans: 0 degrees***
19BT20241	Easy	The power factor lies in between ***Ans: 0 to 1.0***
19BT20241	Easy	The power factor of capacitor is **Ans: The power factor of a pure capacitor is 1**
19BT20241	Easy	The power factor is the ratio of _____ power to the _____ power. ***Ans: Real Power and Apparent Power***
19BT20241	Easy	If there are 8 nodes in network, we can get ____ number of equations in the nodal analysis. **Ans: Having 'n' nodes there will be 'n-1' equations. So the answer is 7.**
19BT20241	Easy	The energy stored in the inductor is? ***Ans:*** $E = 1/2\ LI^2$ ***and it will be stored in a magnetic field***
19BT20241	Easy	Impedance is a complex quantity having the real part as _____ and the imaginary part as _____ **Ans: Resistance and Reactance**
19BT20241	Moderate	A 25 Ω resistor has a voltage of 150 sin377 t. Find the corresponding power. **Ans: $900\ \sin^2 377\ t$** **Use these equations to verify I = V/R and P = VI**

19BT20241	Easy	A practical current source can also be represented as ***Ans: A practical current source could be represented with a resistor in parallel with an ideal current source. (look for such circuit in the options)***
19BT20241	Easy	Which of the following is true about an ideal voltage source? **Ans: Below are the properties of an ideal voltage source, either of them could be the answer** **1. It's voltage is constant at any instant of time and is independent of the current drawn from it.** **2. Has zero internal resistance** **# Pracitcally an ideal voltage source cannot be obtained**
19BT20241	Easy	In case of purely capacitive circuit, average power = ____ and θ=___ ***Ans: average power = 0 and ϑ=90***
19BT20241	Moderate	A voltage v (t) = 100sinωt is applied to a circuit. The current flowing through the circuit is i(t) = 15sin(ωt-30^o). Find the effective value of voltage. **Ans: V_{eff} = (100/$\sqrt{2}$)**
19BT20241	Difficult	Determine the average power delivered to the circuit consisting of an impedance Z = 5+j8 when the current flowing through the circuit is I = 5∠30^o. **Ans: 62.5W** **Explanation:** **Pavg = ((I_m)^2/2)R** **Current Im = 5A** **And calculate the rest….**
19BT20241	Easy	Two ideal voltage sources of unequal output voltages cannot be placed in..... **Ans: Parallel**
19BT20241	Easy	Time constant of an inductive circuit ***Ans:Increses with increase of inductance and decrease of resistance***
19BT20241	Moderate	In a purely inductive circuit if the supply frequency is reduced to 1/2, the current will ***Ans: Be doubled***
19BT20241	Easy	Time constant of a capacitive circuit increases with ***Ans: Increase of capacitance and increase of resistance***