

eExam Question Bank

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<input type="checkbox"/>	Question Type ↓↑	Question ↑↓	A ↑↓	B ↑↓	C ↑↓	D ↑↓	Answer ↑↓	Remark ↑↓
<input type="checkbox"/>	FBQ	A device used to model the effect of magnetic fields on circuit variables is called _____.	Inductor	Inductor				eExam
<input type="checkbox"/>	FBQ	The force required to move a charge is called _____.	Electromotive force	Electromotive force				eExam
<input type="checkbox"/>	FBQ	_____ is made of a bunch of "elements" connected with "ideal wires".	A circuit	A circuit				eExam
<input type="checkbox"/>	FBQ	Real sources of e.m.f have _____, while idealized sources have _____.	small internal resistance, no internal resistance	infinitesimal internal resistance, no internal resistance				eExam
<input type="checkbox"/>	FBQ	_____ theorem states that a linear two-terminal circuit can be replaced by an equivalent circuit of a current source in parallel with a resistor.	Norton's	Norton's				eExam
<input type="checkbox"/>	FBQ	_____ is the point of connection between two or more branches.	A node	A node				eExam
<input type="checkbox"/>	FBQ	_____ is closed path in a circuit.	A loop	A loop				eExam
<input type="checkbox"/>	FBQ	The ability of an element to conduct electric current is appropriately known as _____.	Conductance	Conductance				eExam
<input type="checkbox"/>	FBQ	Millman's Theorem is applicable only to those circuits which can be re-drawn accordingly. True or False _____.	True	True				eExam

<input type="checkbox"/>									
<input type="checkbox"/>	FBQ	<input type="text"/> is any structured technique used to mathematically analyze a circuit.	Network analysis	Network analysis					eExam
<input type="checkbox"/>	FBQ	Energy stored in a capacitor over a cycle when excited by an AC source is <input type="text"/>	Zero	Zero					eExam
<input type="checkbox"/>	FBQ	A practical current source is usually represented by a resistance in parallel with an ideal current source. True or False <input type="text"/>	True	True					eExam
<input type="checkbox"/>	FBQ	Impedance is represented as a <input type="text"/> quantity	complex	complex					eExam
<input type="checkbox"/>	FBQ	A circuit element which restricts the value of voltage and current to zero is called <input type="text"/>	Nullator	Nullator					eExam
<input type="checkbox"/>	FBQ	When voltage changes across the terminals of a capacitor, a current which is <input type="text"/> to the rate of voltage change is produced.	proportional	proportional					eExam
<input type="checkbox"/>	FBQ	Multiple element filters are usually constructed as <input type="text"/>	ladder network	ladder network					eExam
<input type="checkbox"/>	FBQ	An LC circuit can store electrical energy vibrating at its <input type="text"/>	resonant frequency	resonant frequency					eExam
<input type="checkbox"/>	FBQ	In FETs, the drain-to-source current flows via <input type="text"/> that connects the source region to the drain region.	conducting channel	a conducting channel					eExam
<input type="checkbox"/>	FBQ	Both FET and BJT are low-input-impedance device. True or False <input type="text"/>	True	True					eExam
<input type="checkbox"/>	FBQ	The three terminals of a bipolar junction transistor are an emitter, base and <input type="text"/>	collector	a collector					eExam

<input type="checkbox"/>								
<input type="checkbox"/>	FBQ	When a diode is connected in a Zero Bias condition, no external <input type="text"/> is applied to the PN junction.	potential energy	potential energy				eExam
<input type="checkbox"/>	FBQ	The depletion region of P-N junction is one, that is depleted of <input type="text"/>	mobile charges	mobile charge				eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is a semiconductor device used to amplify and switch electronic signals.	transistor	A transistor				eExam
<input type="checkbox"/>	FBQ	The leakage in current of a P-N junction is caused by <input type="text"/>	Heat energy	Heat energy				eExam
<input type="checkbox"/>	FBQ	A bulb rated at 60W, 120V is used for 30 minutes. The charge associated with this operation is <input type="text"/>	900 C	900 C				eExam
<input type="checkbox"/>	FBQ	In a purely inductive circuit, the current lag the voltage by <input type="text"/>	90°	90°				eExam
<input type="checkbox"/>	FBQ	The work done required to move an electron from infinity to a point in question is called <input type="text"/>	Potential difference	Potential difference				eExam
<input type="checkbox"/>	FBQ	The continuum form of Ohm's law is written as: <input type="text"/>	$E = \rho J$	$J = \sigma E$				eExam
<input type="checkbox"/>	FBQ	The process of creating equivalent circuits is called <input type="text"/> .	Miller theorem	Miller theorem				eExam
<input type="checkbox"/>	FBQ	The product of rms voltage and current with sine of the angle between them is called <input type="text"/>	Reactive power	Reactive power				eExam
<input type="checkbox"/>	FBQ	The efficiency during maximum power transfer is equivalent to <input type="text"/> .	50 %	50 %				eExam

<input type="checkbox"/>								
<input type="checkbox"/>	FBQ	Norton's theorem is applicable to AC source. True or False <input type="text"/>	False	False				eExam
<input type="checkbox"/>	FBQ	When the strength of voltage or current changes in the source for any change in the connected network they are called <input type="text"/>	Dependent sources	Dependent sources				eExam
<input type="checkbox"/>	FBQ	Current source includes <input type="text"/> <input type="text"/>	Transistor, diode	diode, transistor				eExam
<input type="checkbox"/>	FBQ	When current through the inductor is constant, the voltage is <input type="text"/>	Zero	0				eExam
<input type="checkbox"/>	FBQ	An operational amplifier is not a good example of a macro model. True or False <input type="text"/>	False	False				eExam
<input type="checkbox"/>	FBQ	The ratio of the phasor voltage across an element to the phasor current through the element is called <input type="text"/>	Impedance	Impedance				eExam
<input type="checkbox"/>	FBQ	Reciprocal of impedance is called <input type="text"/>	Admittance	Admittance				eExam
<input type="checkbox"/>	FBQ	These circuit elements which are not the ideal counterpart of any real component are <input type="text"/>	Nullator and Norrator	Nullator and Norrator				eExam
<input type="checkbox"/>	FBQ	A source with two terminal circuit elements whose terminal voltage is independent of the current drawn from it is called <input type="text"/>	An ideal voltage source	An ideal voltage source				eExam
<input type="checkbox"/>	FBQ	A voltage source which generates a voltage based on it inputs voltage is known as <input type="text"/>	A voltage Controlled Voltage Source	A voltage Controlled Voltage Source				eExam

<input type="checkbox"/>									
<input type="checkbox"/>	FBQ	A measure of the amount of charges stored in an inductor is called <input type="text"/>	Capacitance	Capacitance					eExam
<input type="checkbox"/>	FBQ	The unit of inductance is called <input type="text"/>	Henry	Henry					eExam
<input type="checkbox"/>	FBQ	<input type="text"/> states that the current through a conductor between two points is directly proportional to the potential difference or voltage across the two points	Ohm's law	Ohm's law					eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is a circuit element which produces a voltage across its terminals which is proportional to the current which flows through it	Resistance	Resistance					eExam
<input type="checkbox"/>	FBQ	The algebraic sum of the potential difference in a closed loop of a circuit is always equal to zero. True or False <input type="text"/>	True	True					eExam
<input type="checkbox"/>	FBQ	The process of using Ohms Law to take an existing voltage source in series with a resistance, and replace it with a current source in parallel with the same resistance is called <input type="text"/>	Source Transformation	Source Transformation					eExam
<input type="checkbox"/>	FBQ	A single impedance has two terminals to connect to the outside world can be described as <input type="text"/>	Two-terminal impedance	Two-terminal impedance					eExam
<input type="checkbox"/>	FBQ	Maximum power transfer does not imply maximum efficiency. True or False <input type="text"/>	True	True					eExam
<input type="checkbox"/>	FBQ	Kirchhoff's Voltage Law relates <input type="text"/> __, while Kirchhoff's Current Law results from <input type="text"/>	the principle of conservation of energy, the principle of conservation of electric charge	the principle of conservation of energy, the principle of conservation of electric charge					eExam

<input type="checkbox"/>								
<input type="checkbox"/>	FBQ	Dual Miller theorem is usually implemented by an arrangement consisting of <input type="text"/> supplying the grounded impedance Z through floating impedances	Two voltage sources	Two voltage sources				eExam
<input type="checkbox"/>	FBQ	For loads connected directly to a dc voltage supply, maximum power will be delivered to the load when the load resistance is equal to the internal resistance of the source. True or False <input type="text"/>	True	True				eExam
<input type="checkbox"/>	FBQ	<input type="text"/> is an analytic technique for simplifying the process of deriving driving point and transfer functions for linear electronic circuits	The Extra Element Theorem (EET)	The Extra Element Theorem (EET)				eExam
<input type="checkbox"/>	FBQ	The reactance of a passive, lossless two-terminal (one-port) network always monotonically increases with frequency. This theorem is called <input type="text"/>	Foster's reactance theorem	Foster's reactance theorem				eExam
<input type="checkbox"/>	FBQ	Semiconductor materials are insulators at absolute zero temperature but conduct electricity at room temperature. True or False <input type="text"/>	True	True				eExam
<input type="checkbox"/>	FBQ	The process of modifying the electronic properties of semiconductors by introducing impurities is called <input type="text"/> —.	Doping	Doping				eExam
<input type="checkbox"/>	FBQ	In fabrication of semiconductor devices, <input type="text"/> have the important effect of shifting the material's Fermi level towards the <input type="text"/> that corresponds with the dopant with the greatest concentration	Dopants , energy band	Dopants , energy band				eExam

<input type="checkbox"/>								
<input type="checkbox"/>	FBQ	Introduction of group V elements and group III elements of the periodic table into silicon crystals forms <input type="text"/> , <input type="text"/> respectively	N-type semiconductors, P-type semiconductors	N-type semiconductors, P-type semiconductors				eExam
<input type="checkbox"/>	FBQ	Passive linear filters active which do not depend upon an external power supply and do not contain components such as transistors are based on combinations of <input type="text"/> , <input type="text"/> , <input type="text"/> _____	Resistors, inductors , capacitors	Resistors, inductors, capacitors				eExam
<input type="checkbox"/>	FBQ	Transistors can be classified into <input type="text"/> , <input type="text"/> .	Bipolar Junction Transistors, Field Effect Transistor	Bipolar Junction Transistors,				eExam
<input type="checkbox"/>	MCQ	MOSFET can be used as a	current controlled capacitor	voltage controlled capacitor	current controlled inductor	voltage controlled inductor	B	eExam
<input type="checkbox"/>	MCQ	When the load impedance does not exactly match the line impedance and the load has reactive components in addition to its resistance, the line is said to be _____	open	shorted	reactive	resonant	D	eExam
<input type="checkbox"/>	MCQ	An electric circuit with 10 branches and 7 nodes will have	3 loop equation	4 loop equations	7 loop equations	10 loop equations	B	eExam
<input type="checkbox"/>	MCQ	Why are the variable attenuators applicable for radio broadcasting purposes?	For volume control	For speed control	For time control	For power control	A	eExam
<input type="checkbox"/>	MCQ	A network N' is dual of network N if	Both of them have same mesh equations	Both of them have the same node equations	Mesh equations of one are the node equations of the other	KCL and KVL equations are the same	C	eExam
<input type="checkbox"/>	MCQ	_____ is a semiconductor device used to amplify and switch electronic signals	A transistor	A capacitor	An inductor	A resistor	A	eExam

<input type="checkbox"/>	MCQ	In an ideal diode there is no breakdown, no _____ current, and no forward _____ drop.	reverse, voltage	forward, current	forward, voltage	reverse, current	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	A 12 V car battery is connected to a 1 micro Farad capacitor. Calculate the energy that will be stored in the capacitor	50 micro Joules	70 micro Joules	72 micro Joules	62 micro Joules	C	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	In a bipolar transistor, the base collector junction has	forward bias	reverse bias	zero bias	zero or forward bias	B	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	The circuit whose properties are same in either direction is known as:	Unilateral circuit	Bilateral circuit	Irreversible circuit	Reversible circuit	B	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Special transmission lines constructed with copper patterns on a printed-circuit board that can be used as tuned circuits, filters, or impedance-matching circuits are called _____	microship	stripline	PCB lines	special lines	C	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Application of Norton's theorem to a circuit yields	Equivalent current source and impedance in series	Equivalent current source and impedance in parallel	Equivalent impedance	Equivalent current source	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	The control grid in Pentode is provided between	screen grid and plate	screen and suppressor grid	cathode and screen grid	plate and suppressor grid	C	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Free electrons exist in:	first band	second band	third band	conduction band	D	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	The forbidden gap for germanium is	0.12 eV	0.72 eV	7.2 eV	None of these	B	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	The vacuum tube that cannot be used as an amplifier is:	Pentode	Diode	Tetrode	Triode	B	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	While calculating R_{th} in Thevenin's theorem and Norton equivalent	all independent sources are made dead	only current sources are made dead	only voltage sources are made dead	all voltage sources are made dead	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Find the reactance of a 0.2 Henry inductor at 50 Hertz frequency. At what frequency the reactance is 500 Ohms	62.84 Ohms, 398 Hertz	62.84 Ohms, 50 Hertz	0.0012 Ohms, 50 Hertz	0.0012 Ohms, 398 Hertz	A	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Bridge T network can be used as:	low pass filter	attenuator	higher pass filter	band pass filter	B	<input type="button" value="eExam"/>
<input type="checkbox"/>	MCQ	Source transformation can be performed on:	Resistive circuits only	Capacitive circuits only	Inductive circuits only	Resistive, capacitive and inductive circuits in a frequency domain	D	<input type="button" value="eExam"/>

<input type="checkbox"/>								
<input type="checkbox"/>	MCQ	The purpose of attenuator in electronics is to:_____.	increase signal strength	provide impedance matching	decrease reflections	decrease value of signal strength	D	eExam
<input type="checkbox"/>	MCQ	A capacitor is generally a	bilateral and active component	active, passive, linear and nonlinear component	linear and bilateral component	non-linear and active component	C	eExam
<input type="checkbox"/>	MCQ	In an intrinsic semiconductor, the Fermi level	Lies at the center of forbidden energy gap	Is near the conduction band	Is near the valence band	May be a anywhere in the forbidden energy	D	eExam
<input type="checkbox"/>	MCQ	An attenuator operates on:	RC network	RL network	R's network	LC network	C	eExam
<input type="checkbox"/>	MCQ	In a bipolar transistor, the emitter base junction has:	forward bias	reverse bias	zero bias	zero or forward bias	A	eExam
<input type="checkbox"/>	MCQ	The energy gap in a semiconductor	Increases with temperature	Does not change with temperature	Decrease with temperature	Is zero	C	eExam
<input type="checkbox"/>	MCQ	In a series resonant band-pass filter, a lower value of Q results in_____	a higher resonant frequency	a smaller bandwidth	a higher impedance	a larger bandwidth	D	eExam
<input type="checkbox"/>	MCQ	The following are the benefits of transistors over vacuum tubes in most applications:	Small size and minimal weight, allowing the development of miniaturized electronic devices	Lower possible operating voltages	Lower power dissipation and enhance energy efficiency	Lower reliability	D	eExam
<input type="checkbox"/>	MCQ	In a Pentode tube, a control grid is provided to:	restrict the secondary emission from the plate	accelerate the electrons emitted from the plate	collect electrons from the space charge	control the number of electrons moving from cathode to plate	D	eExam
<input type="checkbox"/>	MCQ	At a certain frequency, the output voltage of a filter is 6 V and input is 12 V. What is the filter's bandwidth?	8.5 Hz	53 Hz	102 Hz	45 Hz	B	eExam
<input type="checkbox"/>	MCQ	The forward-bias and the reverse-bias properties of the p-n junction imply that it can be used as:	a diode	a transistor	a capacitor	an inductor	A	eExam
<input type="checkbox"/>	MCQ	In a certain parallel resonant band-pass filter, the resonant frequency is 14kHz. If the bandwidth is 4kHz, the lower frequency is:	10 kHz	8 kHz	12 kHz	3 kHz	C	eExam
<input type="checkbox"/>	MCQ	Vacuum tubes are useful in:	electroplating plants	radio receivers	radio transmitters	public address systems	C	eExam
<input type="checkbox"/>	MCQ	At room temperature, the current in an intrinsic semiconductor is due to:	holes	electrons	ions	holes and electrons	D	eExam

<input type="checkbox"/>	MCQ	"Maximum power output is obtained from a network when the load resistance is equal to the output resistance of the network as seen from the terminals of the load". The above statement is associated with	Millman's theorem	Thevenin's theorem	Superposition theorem	Maximum power transfer theorem	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	In a triode, the value of parasitic capacitance increases as:	current decreases	current increases	signal frequency decreases	signal frequency increases	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	If anode of vacuum tube is not connected to any external circuit and cathode is heated then	glass tube gets charged	electrons form a space charge	electrons escape through glass tube	protons are emitted from anode	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Which of the following is non-linear circuit parameter?	Inductance	Condenser	Wire wound resistor	Transistor	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The following vacuum tubes are applicable in electronics, where more than two grids are needed, EXCEPT	Hexodes	Pentodes	Diodes	Tetrodes	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Kirchhoff's voltage law is related to	junction currents	battery e.m.fs.	IR drops	both b and c	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	How many free electrons does a p-type semiconductor has?	only those produced by thermal energy	only those produced by doping	those produced by doping as well as thermal energy	Any of the above	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	When two alternating waves attain their peak values simultaneously the waves are	In quadrature	In phase	Out of phase by 180°	None	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Kirchhoff's current law is applicable to only	junction in a network	closed loops in a network	electric circuits	electronic circuits	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Triodes usually produce more noise as compared to Pentodes	False	True	Cannot predict	Statement is incorrect	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	To determine the polarity of the voltage drop across a resistor, it is necessary to know	the value of current through the resistor	the value of resistor	the e.m.fs in the circuit	the direction of current through the resistor	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	In vacuum diode, emission of electron is achieved by:	electron bombardment	electrostatic field	magnetic field	heating	D	<input type="checkbox"/> eExam

<input type="checkbox"/>	MCQ	Which of the following is correct about semiconductors?	Semiconductor materials do not conduct electricity at room temperature.	Semiconductor materials are conductors at absolute zero temperature	Semiconductor materials are insulators at absolute zero temperature but conduct electricity at room temperature.	Semiconductor materials conduct at absolute zero temperature	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Two resistor of 12Ω and 4Ω respectively are connected in parallel. The effective resistance will be:	3Ω	6Ω	16Ω	8Ω	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Introduction of impurities into semiconductors for modification of electronic properties is called_____	fabrication	doping	synthesis	characterization	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	The complex numbers that represent the complex amplitude of a sinusoidal function of time is called_____	Phasors	Reactance	Impedance	Capacitance	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Two or more branches of a circuit are connected at a point called _____.	loop	intersect	cross-section	node	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Several leakage of electric current of a p-n junction is due to_____	Reverse bias mode	forward bias mode	generation of heat energy	magnetic force	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Vacuum tubes require how many sources of electrical power?	1 source	2 sources	3 sources	4 sources	B	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	According to Kirchhoff's voltage law, the algebraic sum of all potential difference across resistors and e.m.fs. In any closed loop of a network is always	negative	positive	determined by battery e.m.fs.	zero	D	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Electronic signals can be amplified and swithed using	a capacitor	an inductor	a transistor	a transducer	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Electric circuit theorem that states that a linear two-terminal circuit can be replaced by an equivalent circuit of a current source in parallel with a resistor is called_____	Thevenin	Milman	Norton	Superposition	C	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	A voltage source without any internal resistance is called _____	ideal source	real source	Non-resistive source	resistive source	A	<input type="checkbox"/> eExam
<input type="checkbox"/>	MCQ	Kirchhoff's second law is based on law of conservation of	charge.	energy.	momentum.	mass.	B	<input type="checkbox"/> eExam

<input type="checkbox"/>								
<input type="checkbox"/>	MCQ	The properties of a phasor include the following except_____	length	angular speed	projection	None of the above	D	eExam
<input type="checkbox"/>	MCQ	The device that is used to store magnetic charges is called_____	a capacitor	an inductor	an electric device	a magnetic device	B	eExam

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