

Question FBQ1 : Electrons are the minority carriers in _____semiconductors.

Answer: n-type

Question FBQ2 : A p-type semiconductor contains holes and negative ions

Answer: negative

Question FBQ3 : Depletion layer is caused by _____.

Answer: recombination

Question FBQ4 : The reverse current in a _____is usually very small.

Answer: diode

Question FBQ5 : The ideal current voltage source has zero output impedance and …… impedance

Answer: zero input

Question FBQ6 : There are two non- abstract active circuit elements and both of them are__.

Answer: sources

Question FBQ7 : When voltage changes across its terminals, capacitance produces a current which is proportional to the rate of_____.

Answer: voltage change

Question FBQ8 : If you make a current flow through an inductor, it produces a magnetic flux which is proportional to the rate of _____.

Answer: current change

Question FBQ9 : A magnetic field is set up when a current flows through inductance which creates a magnetic force which is detectable with a magnetic _____.

Answer: compass

Question FBQ10 : _____is the unit of inductance.

Answer: Henry

Question FBQ11 : _____analysis is facilitated by the introduction of two hypothetical elements called nullator and the norrator.

Answer: Circuit

Question FBQ12 : _____ theorem states that any combination of voltage sources, current sources and resistors with two terminals is electrically equivalent to a single voltage and a single resistor.

Answer: Thevenin

Question FBQ13 : _____in the equations for the impedance of inductors and capacitors indicate that the voltage across a capacitor lags the current through it by a phase of 2.

Answer: phase angles

Question FBQ14 : Ideal inductors and capacitors have a purely imaginary reactive _____.

Answer: Impedance

Question FBQ15 : In vacuum tubes, electrons travel through ___ and not through a conducting material

Answer: Vacuum

Question FBQ16 : A component with a finite reactance induces a phase shift between the voltage across it and the____ through it.

Answer: Current

Question FBQ17 : Circuit solutions involving mixed source are often simplified by a source_____.

Answer: transformation

Question FBQ18 : A current source produces current in a conductor which is related to _____.

Answer: electric charge

Question FBQ19 : _____theorem is important in electrical network analysis and synthesis.

Answer: Fosters reactance

Question FBQ20 : A series LC circuit has an impedance that is the sum of the impedance of an inductor and _____.

Answer: Capacitor

Question FBQ21 : Miller theorem refers to the process of creating equivalent _____.

Answer: circuit

Question FBQ22 : _____theorem implies that an impedance elements is supplied by two arbitrary voltage sources that are connected in series through the common grounds

Answer: Miller

Question FBQ23 : Maximum power transfer is not synonymous with maximum _____

Answer: Efficiency

Question FBQ24 : The dual Miller theorem refers to impedance supplied by the two connected in parallel _____ sources.

Answer: current

Question FBQ25 : Both Millers theorems are based on the two _____ circuit laws

Answer: Kirchhoff

Question FBQ26 : Resistors are circuit elements that impede the passage of electrical charges in agreement with _____.

Answer: Ohms law

Question FBQ27 : _____theorem also called the parallel generators theorem.

Answer: Millman

Question FBQ28 : Ohms and Kirchhoffs laws serve as the basic which _____ theorem is derived.

Answer: Millman

Question FBQ29 : The total equivalent conductance of a super node is the sum of the conductance of each branch according to _____theorem.

Answer: Millman

Question FBQ30 : _____theorem as an extension of Thevinins’s theorem .

Answer: Nortons

Question FBQ31 : _____states that any collection of voltage sources, current sources, and resistors with two terminals is electrically equivalent to an ideal current source in parallel with a single resistor

Answer: Nortons

Question FBQ32 : Avalanche in diode occurs at _____voltage

Answer: breakdown

Question FBQ33 : The potential barrier of a silicon diode is _____.

Answer: 0.7 V

Question FBQ34 : The reverse saturation _____in a Silicon Diode is lower than that of Germanium diode.

Answer: current

Question FBQ35 : Most of the energy distribution theorems and extremum principles in network theory can be derived from _____ theorem

Answer: Tellegen

Question FBQ36 : _____theorems gives a simple relation between magnitudes that satisfy the Kirchhoff`s laws of electrical circuit theory.

Answer: Tellegen

Question FBQ37 : Any black box containing only voltage sources, current sources, and other resistors can be converted to a Thevenin equivalent circuit comprising exactly one voltage source and _____.

Answer: one resistor

Question FBQ38 : The simplest vacuum tubes have a filament called the _____.

Answer: Cathode

Question FBQ39 : _____ needs a considerable temperature differential between the hot cathode and the cold anode

Answer: vacuum tube

Question FBQ40 : _____ is a material with electrical conductivity due to electron flow which is intermediate in magnitude between a conductor and insulator.

Answer: Semiconductor

Question FBQ41 : If a control grid is added between the cathode and the anode of the vacuum tube, it is called a _____.

Answer: Triode

Question FBQ42 : _____ is a voltage controlled in that a voltage applied as an input can be used to control the flow of electrons between the cathode and the anode.

Answer: triode

Question FBQ43 : The development of the thermionic diode and the triode led to great improvement in the telecommunications technology, particularly the birth of ___.

Answer: broadcast radio

Question FBQ44 : The non linear characteristic of the triode caused harmonic distortions at low volumes in early vacuum tube ____ amplifier.

Answer: audio

Question FBQ45 : The process of adding controlled impurities to a semiconductor is known as ____.

Answer: Doping

Question FBQ46 : _____ tube were specifically designed for demodulation of synchronous signals of colour signals in colour television receivers.

Answer: sheet beam

Question FBQ47 : Zener diode can be described as a device with ___ voltage.

Answer: constant

Question FBQ48 : The diode current is large for ____bias.

Answer: forward

Question FBQ49 : The terminals of abstract active element possesses input ports and _____ ports.

Answer: Output

Question FBQ50 : A Diode is a _____ device

Answer: linear

Question MCQ1 : The following are passive circuit element except _____.

Answer: Voltage

Question MCQ2 : The following are the categories of the single circuit element except _____.

Answer: passive abstract source

Question MCQ3 : Circuit analysis is facilitated by the introduction of the hypothetical elements called _____.

Answer: Nullator and Norrator

Question MCQ4 : An intrinsic semiconductor at room temperature has _____.

Answer: A few free electrons and holes

Question MCQ5 : Which of these theorems is frequently called “the parallel generator theorem”.

Answer: Millman's theorem

Question MCQ6 : _____ converters were generally used for frequency conversion in super heterodyne receivers in favour of a combination of a triode.

Answer: Pentagrid

Question MCQ7 : _____ vacuum tubes use a specially designed vacuum tube diode with a rotating anode to dissipate large amounts of heat developed during operation

Answer: Medical radiographic

Question MCQ8 : _____ vacuum tube is a special purpose tube filled with low - pressure gas or mercury, some of which vaporizes.

Answer: Thyratron

Question MCQ9 : _____ is extremely specialized tubes which is used for extremely precise, rapid high - voltage switching.

Answer: Klystron

Question MCQ10 : At room temperature, an intrinsic semiconductor has some holes in it due to ___.

Answer: thermal energy

Question MCQ11 : _____ replacement represented a major cost of operation for early radio receiver users.

Answer: Battery

Question MCQ12 : The discovery of the Edison effect led to the development of _____

Answer: Vacuum tube

Question MCQ13 : In vacuum tubes, electrons travel through vacuum and not through _____ material.

Answer: Conducting

Question MCQ14 : some vacuum tubes are filled with gas under low _____

Answer: Pressure

Question MCQ15 : Heat generated in vacuum tubes are mainly from the _____

Answer: Cathode

Question MCQ16 : _____ Materials are the foundation of modern electronics

Answer: semi conductor

Question MCQ17 : _____ is a material with electrical conductivity due to electron flow which is intermediate in magnitude between that of a conductor and an insulator

Answer: Semiconductor

Question MCQ18 : Semiconductor materials are insulators at absolute zero _____

Answer: Temperature

Question MCQ19 : In a metallic conduction, current is carried by the flow of _____

Answer: Electrons

Question MCQ20 : The number of holes in an intrinsic semiconductor is ___.

Answer: equal to number of electron

Question MCQ21 : The free electron energy being the energy required for an electron to escape entirely from the _____

Answer: Material

Question MCQ22 : The process of adding controlled impurities to a semiconductor is known as _____

Answer: Doping

Question MCQ23 : usually the thermal energy available at room temperature is sufficient to ionize most of the _____

Answer: Dopant

Question MCQ24 : The P -N junction possesses some properties which have useful applications in modern _____

Answer: Electronics

Question MCQ25 : The forward bias and the reverse bias properties of the P-n junction imply that it can be used as a _____

Answer: Diode

Question MCQ26 : _____ is one of the simplest semiconductor devices.

Answer: Diode

Question MCQ27 : _____ has the characteristics of passing current in one direction only

Answer: Diode

Question MCQ28 : If the diode is reverse biased, only the leakage current of the intrinsic semiconductor _____

Answer: Flows

Question MCQ29 : _____ the voltage well beyond 0.7 Volt in silicon diodes may result in high enough current to destroy the diode

Answer: Increasing

Question MCQ30 : Transistors can generally be classified into _____

Answer: 2

Question MCQ31 : _____ is a semiconductor device used to amplify and switch electronic signals

Answer: Transistor

Question MCQ32 : _____ are commonly used as electronic switches for both high power applications and low power application such as gates

Answer: Transistor

Question MCQ33 : Holes act as ___.

Answer: positive charges

Question MCQ34 : An LC circuit can store electrical energy vibrating at its resonant _____

Answer: Frequency

Question MCQ35 : To produce P-type semiconductors, we need to add ____.

Answer: trivalent impurity

Question MCQ36 : The resonance effect occurs when inductive and capacitive reactances are equal to absolute _____

Answer: Value

Question MCQ37 : The total impedance is given by the sum of the inductive and _____

Answer: Capacitve

Question MCQ38 : A series resonant circuit provides _____ magnification

Answer: Current

Question MCQ39 : A parallel resonant circuit provides _____ magnification

Answer: Voltage

Question MCQ40 : Which of the following circuit elements can be described as unidirectional

Answer: Diode

Question MCQ41 : Due to high impedance, the gain of amplifier is a maximum at resonant---------

Answer: Frequency

Question MCQ42 : Passive filters are based on combination of the following except _____.

Answer: Transistor

Question MCQ43 : _____ element filters are usually constructed as a ladder network.

Answer: Multiple

Question MCQ44 : _____ attenuators in circuits are used to lower voltage, dissipate power, and to improve impedance matching.

Answer: Fixed

Question MCQ45 : Basic circuits used in attenuators are T pads and ____.

Answer: pi pads

Question MCQ46 : _____ converts alternating current at one voltage to the same waveform at another voltage.

Answer: Transformer

Question MCQ47 : _____ are sometimes used to match the impedances of circuits with different impedances.

Answer: Transformer

Question MCQ48 : _____ impedance matches are easiest to design and can be achieved with a simple L pad consisting of only two resistors.

Answer: Resistive

Question MCQ49 : A current source which generates a current based on another voltage and which output current is related to its input voltage by a gain factor is known as a

Answer: None of the options

Question MCQ50 : ___ is a circuit element which produces a voltage across its terminals which is proportional to the current which flows through it.

Answer: Resistance