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