Electronics Engineering Job Interview Questions And Answers

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Electronics Engineering Interview Questions And Answers Guide.

Question - 1:

The represent number 35 in binary, number of bits required are?

Ans:

(A) 5 (B)6 (C) 4 (D) 33
View All Answers

Question - 2:

Explain what is the Tri State of a Signal?

Ans:

In digital ciruit, the gate output can be only high or low. In highstate the output source current at a   minimum voltage, greater than ~2.8V if load(fan out) is proper. In low state it will sink current at max output voltage less than ~0.8V. Some times it is derirable to have a state output both not high or low. with neither sinking or sourcing (with high output impedance). This is called tristate. Tristate output cannot change output condition of succeding logic gates, unless tristate is disabled.
View All Answers

Question - 3:

Explain in wave guides TEM wave propagation is not exit, give the physical interpretation?

Ans:

Please share your answers.
View All Answers

Question - 4:

Why the input resistance of an ideal OP-AMP is infinite and output resistance is zero?
secondly, how can we measure these resistances(input and output) in case of an ideal OP-AMP and Real OP-AMP in the following conditions when
1- load is not connected.
2- load is connected.

Ans:

Ideal OP-AMP is a power ful concept.
If one goes through the history of amplifying devices, it becomes clear that less it loads the previous stage, better the output signal. ie. it is a trend toward higher and higher input impedances.
Also it is better to maintain the signal level irrespective of the LOAD connected at the ouput. Lesser the output impedance, less the signal amplitude reduction when load is connected. ie. it is a trend toward lower and lower output impedances.
As ideal opamp is a concept , by virtue it has zero output impedance and infinite input impedance, and they are not physically measurable but has to be taken for granted for the use in theoritical analysis.
To measure input resistance, of non ideal opamp, connect a known source at the input and give a signal (within   Specifications) through a current meter of sufficient precision. Input voltage by current gives the input impedance.
To measure input resistance, of non ideal opamp, connect a known source at the input and give a signal (within   Specifications) through a current meter of sufficient precision. Input voltage by current gives the input impedance.
To measure output resistance, of non ideal opamp, connect a known source at the input such that the output does not saturate and connect a load (within Specifications) through a current meter of sufficient precision and meaure the output voltage. Output voltage by current gives the output impedance.
Please refer application notes by device manufacturers freely availble in internet for more precise and practical solutions.
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Question - 5:

What are the differences between voltage and current controlled devices?

Ans:

In any (electronic) device controlling parameter is current it is called current controlled device. eg bilpolar transistor- output current is a function of base current.
In any (electronic) device controlling parameter is voltage it is called voltage controlled device. eg Field effect transistor- output current is a function of gate voltage.

It depends on the inherent physical mechanism which defines the primary (independent) controlling parameter.

View All Answers

Question - 6:

What is the difference between Silicon Controlled Switch (SCS) and Gate Turn-off Switch (GTO)?

Ans:

SCS is nothing but the switch (sillicon controlled switch SCR),but GTO is one of the turn off method in SCR.if any other answer for this question please forward me too the answer.

View All Answers

Question - 7:

Describe transducer EI pickups in instrumentation and control engineering?

Ans:

Please share your answers.

View All Answers

Question - 8:

Explain how many type of resistor are there in diode?

Ans:

They are two types one is forward resistance
1.Forward resistance
2.Reverse
resistance
1.Forward resistance
This is the resistance offered in forward bias condition of the diode.
It is calculated by with the help of graph for voltage and current characteristic.
2.Reverse resistance
This resistance is offered in the reverse bias condition of the diode. It is also calculated by the same method.

View All Answers

Question - 9:

What is Edison Effect?

Ans:

In a conducting material, the electrons are governed by Fermi-Dirac statistics. The baseline electron energy is the Fermi Energy*, and at low temperatures the electrons all exist at or below this level. As temperature is increased, so the distribution function for the electrons develops a high energy 'tail'. Some of these electrons have sufficient energy to pass over the surface potential barrier between the material and the vacuum. This process of increasing the temperature of a bulk material to increase the number of electrons which can leave the material is called thermionic emission or Edison effect.

View All Answers

Question - 10:

Tell me what are the components has to be done in FPGA board (Altera)?

Ans:

Please share your answers.

View All Answers

Question - 11:

What is function of ALE in 8085 microprocessor?

Ans:

AlE stands for the address latch enable
it 's working is that it differentiate the address and data bus in microprocessor.
when it is high it select address bus .
when it is low it select data bus.

View All Answers

Question - 12:

Explain what is meant by saying at what current is transistor biased?

Ans:

Bias current of a transistor is the preset DC current when no input voltage signal is applied to it.

View All Answers

Question - 13:

Explain design 8421 to 2421 binary code converter?

Ans:

Please share your answers.

Question - 14:

What is the difference between Power Amplifier and Voltage Amplifier?

Ans:

In power amplifier feedback employed is current feedback and In voltage amplifier, voltage feedback is employed.

Question - 15:

Explain how to manufacture the CMOS inverter?

Ans:

by connecting a pmos transistor and cmos transistor in series and take the output from middle of the connection

Question - 16:

Why do we use two ground pins in the pin diagram of 8086?

Ans:

There are basically two reasons for doing so, one is to remove GROUND BOUNCE one more reason is circuit complexity demands a large amount of current flowing through the circuits, and multiple grounds help in dissipating the accumulated heat so that device will be safe.

Question - 17:

Explain difference between DCS & PLC & SCADA?

Ans:

PLC stands for Programmable Logic ControllerDCS for Data control SystemSCADA for Supervisory Control And Data Acquisition SCADA involves supervision by a user, in most cases the plant controller.Whereas PLC is the means by which he performs the function of SCADA.DCS on the other hand stand only to control the system and not to log any datain the process of controlling.

Question - 18:

Explain Find Conductivity, Resistivity and Resistance?

Ans:

Please share your answers.

Question - 19:

Tell us Design gray to binary code converter?

Ans:

Binary of 1011 -
1101
Steps
1. write the msb as itseif (here retain fourth bit say 1) and it will be the
msb of binary.
2. add the msb of binary (say 1) with next bit of gray (say 0 ie third bit)and
the sum (1) becomes next bit of binary. note: if any carry generated just discard
it.
3. previous sum (1) is again added with next bit of gray(1 ie second bit) and
this sum(0) becomes second bit of binary .
4. previous sum (0) is again added with next bit of gray (1 ie first bit) and
the sum (1) becomes first bit of binary.

Question - 20:

Explain what is the meaning of Tristate Signal in Electronics?

Ans:

An active digital line in case of multiplexed buses has three states. high & low when controlled, and tristated when not controlled or when it is free to be used by other controller. this state where in it's level is not determinable or when it is floating is called tristate.

Question - 21:

How to calculate the rectangle of conductor of different sizes?

Ans:

Please share your answers.

Question - 22:

Explain why BJT is known as current controlled device and FET is known as voltage controlled device?

Ans:

BJT as current controlled device -
Base current controls the collector an emitter currents
FET as voltage controlled device-
Field of p or n region decides width of conducting channel in n type or p type FET

Question - 23:

How many 2:1 multiplexers do we need to make a 2 input XOR gate?

Ans:

A xor B= A'B + AB'
hence, if A=0, then the output is B
if A=1, then the output is B'
so we need only ONE mux (2:1), which is controlled by A, and its inputs are B --> mux_in_0
B' --> mux_in_1

Question - 24:

What is hybrid parameter?

Ans:

the h-parameter or the hybrid parameters of a transistor helps us to analyse the amplifying action of transistor for small signal .

Question - 25:

How to convert a binary number into BCD number directly and vice-versa, without converting it into any other number system?

Ans:

It depends on the range. An algorithm can be used.
For a number in the range of 0 to 19 (decimal), the following algorithm can be used:
if a<10
a_BCD=a;
else if a<20
a_BCD=a+0x06;
end
for example if a=0x0E, then a_BCD=0x0E+0x06=0x14, which is the BCD representation of 0x0E.
This could be generalized for a number in the range of 0 to 99: a_BCD=a+n*0x06, where 10*n<=a<10*(n+1).

Question - 26:

Explain differences between microprocessor and micro controller?

Ans:

The microprocessor is the integration of a number of useful functions into a single IC package.
These functions are: The ability to execute a stored set of instructions to carry out user defined tasks. The ability to be able to access external memory chips to both read and write data from and to the memory.
Basically, a microcontroller is a device which integrates a number of the components of a microprocessor system onto a single microchip.
So a microcontroller combines onto the same microchip : The CPU core Memory (both ROM and RAM) Some parallel digital I/O Essentially, a microcontroller is obtained by integrating the key components of microprocessor,RAM, ROM, and Digital I/O onto the same chip die. Modern microcontrollers also contain a wealth of other modules such as Serial I/O, Timers, and Analogue to Digital Converters.

Question - 27:

Suppose if there is the level of impurity in p-type & n-type semiconductor of pn junction diode is different then what effect on depletion?

Ans:

there will be a change in the depletion width.. higher the doping concentration smaller the width

Question - 28:

Explain the importance and effect of IF IN radio receiver?

Ans:

The superhet rodyne receiver is quite important in a radio receiver.
It enable the receiver to use a single frequency as the center frequency of the band-pass filter. this frequency is the Intermediate Frequency (IF).
The received signal is going through a frequency translation (in practice it goes through a mixer), which makes it
IF centered.

It should be noted that a static filter is much easier to build and is much more efficient.

View All Answers

Question - 29:

Tell me what is the max. or min . value of TV in MSA to calculate R&R?

Ans:

Please share your views.

View All Answers

Question - 30:

A description of the fundamental elements that are required to make a digibox. I assume that they all record nowadays?

Ans:

Please share your answers.

View All Answers

Question - 31:

Water boiling point temperature is 100 deg. in which liquid state is convert into the gas state,but in turbine which principle is use by which exhaust temperature is 50-55 deg and is in the stage of steam?

Ans:

Please share your experience.

View All Answers

Question - 32:

Why does mode in arm in cpsr have 5 bits instead it can have only 3 bits to define all the 7 modes?

Ans:

Please share your answers.

View All Answers

Question - 33:

What is the difference between PLC and DCS control system?

Ans:

Actually DCS stands for Distribute control system and PLC for Programmable logic controllers... Both are used for Industrial automation. each have their adv and dis adv.. shortly this is all marketing strategies , both do same function.....

View All Answers

Question - 34:

Explain the approximate cost of the following corrosion monitoring systems. Smart pebbles ECI-1(Embedded corrosion instrument) Monitoring cables Time Domain Reflectometry &Corrosion Penetration Monitoring system(CPMP)?

Ans:

Please share your answers.

View All Answers

Question - 35:

The number of columns in a state table for a sequential circuit with m flip-flops and n inputs is
1. m + n
2. m + 2n
3. 2m + n
4. 2m + 2n

Ans:

Its 2m+2n because..
If there are m flip-flops, there should be 2m nodes. If there are n inputs, then each node will have 2n.

View All Answers

Question - 36:

How to test on design and style in software?

Ans:

We can use GUI testing techniques and we can use also use automation tool for stylish applications.

View All Answers

Question - 37:

Explain what are semiconductor devices?

Ans:

there are three types of materials. they are conductor , semi conductor and insulator.
where the semi conductor lies between the other two. ie. controlled conduction is possible in semi conductor.
thats why it is preferred in electronic devices.
A PN junction is formed in all the three types of materials. but in semi consuctor the junction is very thin and easy to break it with the very low voltage.

View All Answers

Question - 38:

Tell me why 440 volts instead of 660 volts in 3 phases of supply system?

Ans:

In single phase supply, 220V is voltage diff. between Line & neutral while, In 3 phase supply there are 3 supply lines phase shifted at 120deg from each other, so net voltage diff. (the phase resultant) between two phases in accordance with phase angle of 120deg is 440V.
However in 3 phase, 4 line systems having 1 neutral also, the voltage diff. between neutral and any of the phase is 220V...

View All Answers

Question - 39:

Tell me Is there any junction in conductor?

Ans:

No there is no junction in conductor. because its not semi-conductor. only semi-conductor contains junction

View All Answers

Question - 40:

Please provide details of the following standards :RS-23-C 802.3 X.25 802.11?

Ans:

In Telecommunications , RS 232 C is a standard for serial binary data interconnection between a Data Terminal equipment and Data Circuit terminating equipment.
802.3 is a standard specification for Ethernet, a method of physical communication in a local area network (LAN), which is maintained by the Institute of Electrical and Electronics Engineers (IEEE).
X.25 is an International Telecommunication Union-Telecommunication Standardization Sector (ITU-T) protocol standard for WAN communications that defines how connections between user devices and network devices are established and maintained.
802.11 refers to a family of specifications developed by the IEEE for wireless LAN technology. 802.11 specifies an over-the-air interface between a wireless client and a base station or between two wireless clients.

View All Answers

Question - 41:

Suppose In market 4N27 is not easily available So Which OPTO ISOLATOR can I use at the place of this?

Ans:

what is 4N27

View All Answers

Question - 42:

Which of the following architectures is/are not suitable for realizing SIMD?
1. vector processor
2. array processor
3. von neumann
4. both array processor and von neumann

Ans:

2. array processor

View All Answers

Question - 43:

Which of the following statement about bit-slice processors is correct ?
1. they can be cascabed to get any desired word length processor
2. their speed of operation is independent of the word length configured
3. they do not contain anything equivalent of a program counter in a normal micro-processor
4. they contain only the data path of a normal CPU

Ans:

2. their speed of operation is independent of the word length configured

View All Answers

Question - 44:

In information system design, to increase the adaptability of the system
1. the subsystems should be defined so that each performs a single complete function
2. the interconnections between subsystems should be increased
3. internal working of another module with the system should be increased
4. nothing should be done

Ans:

3. internal working of another module with the system should be increased

Question - 45:

A computer system has 4k word cache organised in a block-set-associative
manner, with 4 blocks per set,64 words per block. The number of bits in the SET and WORD fields of the main memory address format is
1. 15,4
2. 6,4
3. 7,2
4. 4,6

Ans:

2. 6,4

Question - 46:

Explain the following fields objective qns and answers.
DSP
C
DIGITAL ELECTONICS
FUNDAMENTAL ELECTONICS
LIC

Ans:

Please share your views.

Question - 47:

Consider a computer with 8M bytes of main memory and a 128K cache. The cache block size is 4K. It uses a direct mapping scheme for cache management. How many different main memory blocks can map onto a given physical cache block.
1. 2048
2. 256
3. 64
4. None of these

Ans:

2. 256

Question - 48:

On-line information system provides
1. users with immediate access to all the files for interrogration
2. users to do initial amendment or updation of files initially
3. processing of periodically collected data in group at specific intervals
4. the usage of separated and not connected data with the main computer

Ans:

2. users to do initial amendment or updation of files initially

Question - 49:

Why length of antenna is taken as one half of wavelength or one fourth of wavelength? Why not one eighth or one sixteenth?

Ans:

Please share your answers.

Question - 50:

What is the frequency range of satellite communication?

Ans:

Satellite mainly works in c band(4-8GHz) or KU band(12-18GHz) and these are mainly for the downlink.

Question - 51:

What is difference between a multiplexer and encoder? also What is the between demultiplexer and decoder?

Ans:

Please share your answers.

Question - 52:

What is the difference between latches and flip flop

Ans:

Latche is a bistable circut which respons to change of logic levelas they occure.It has no external inputs.
Flip flop is a basic element of memory . it store a single bit.It has a multiple input.

View All Answers

Question - 53:

What is the use of excitation table in digital electronics?

Ans:

Excitation table is required when we want to design a state machine from the truth table of any of the flip flops used.

View All Answers

Question - 54:

How will you determine what frequency the device has without using oscilloscope?

Ans:

The frequency of a device can also be calculated by the method below:-
Speed of light (c) =299,792,458 m/s. Planck constant (h) =4.13566733E'15 eV s (1E-15 denotes "10 in power -15")
Frequency(Hz) = Energy/h=Energy/4.13566733E'15 eV s. Energy needs to be expressed in "electron volt (eV)" units. For example, to calculate the wavelength of the ultraviolet (UV) light with the energy 4.5 eV: Frequency =4.5 eV/4.13566733E'15 eV s=1.09E15 Hz=1,090 THz. Note the prefix "Tera(T)-" implies the magnitude of 1E12
Divide the speed of light by the wavelength to calculate frequency. Frequency (Hz) = c/ wavelength(m) =299,792,458 (m/s)/frequency. For example, to calculate the frequency of the visible red light with the wavelength of 700 nanometers (nm): 700 nm equals to 7E-7 m. Wavelength=299,792,458 (m/s)/7E-7m= 4.28E14=428 THz.

View All Answers

Question - 55:

How to convert a JK flip flop into SR flip flop and vice versa, a SR flip flop into D or T flip flop and vice versa?

Ans:

An SR flip flop can be converted to D flip flop by shorting S terminal through a Not gate or inverter and applying it to R terminal and the S terminal is kept the same as in SR flip flop.
To convert SR to JK flip flop an extra input to the gate is applied to first gate in both cases. That is in extra to the input and clock at S an input is also given from complement of Q to get J at S terminal and at K terminal an input from Q is given in extra to input and clock.
JK can be converted to T by shorting J and K terminal of JK flip flop.

View All Answers

Question - 56:

Explain why regeneration is not possible in semiconductor

Ans:

Please share your answers.

View All Answers

Question - 57:

Which one of the following is used for high speed power application?
a) BJT
b) MOSFET
c) IGBT
d) TRIAC

Ans:

c) IGBT

View All Answers

Question - 58:

What is the effect of increase resistance on reluctance?

Ans:

The rate of flow of charge(called as current) is inversely proportional to the resistance of the conductor through which the current is flowing in a particular direction. i.e. when we increase the resistance the current magnitude goes down and vice-versa. And thus the flow of current can be easily controlled by deploying proper resistance.

View All Answers

Question - 59:

Thermistors Resistance
a) increases as heat increases
b) decrease as heat increases
C) remains constant
d) It is nowhere related to heat.

Ans:

Answer is (b) heat is nothing but the temperature, so thermistor resistance decreases with increasing temperature.

Question - 60:

Tell me how many mosfet switches are there in dynamic ram?

Ans:

there are 16 mosfet switches in a DRAM

Question - 61:

Explain why we are using the bridge rectifier in most of the circuits instead of full wave rectifier even though the output of both are same?

Ans:

TUF for bridge rectifier is 81.2% compared to 57.4% of center tapped .
Also an ordinary transformer is enough.
PIV across a diode is just Vm.

Question - 62:

What is negative frequency?

Ans:

it can't be negative because freguency is simply the reciprocal of time and time can't be negative.
We use negative frequencies in our calculations just for easieness but remember at last we neglect it also.

Question - 63:

Fermi level for an intrinsic semiconductor lies midway between the valence and conduction bands, because.
a) the temperature does not influence its position.
b) the effective mass of hole is greater than that of electron
c) the effective mass of electron is taken equal to that of hole
d) none of the above
Which is the right option?

Ans:

Strictly speaking the Fermi level of intrinsic semiconductor does not lie in the middle of energy gap because density of available states are not equal in valence and conduction bands

Question - 64:

What is the difference between LEDs and PN junction diode?

Ans:

Led is made of compound elements i.e combination of two elements like GaAs,Gaph etc..the light emission is due to transmission of electrons...it is also a PN junction diode...A elementary compound can never act as a LED like SI,GE.

Question - 65:

What is power electronics?

Ans:

Power electronics is the technology associated with high power which is more than 430v 3 phase supply.Generally it is consider in industries for the efficient conversion, control and conditioning of electric power by static means from its available input form into the desired electrical output form.

Question - 66:

If the input J is connected through K input of J-K flip-flop,
the flip-flop will behave as a
1. D(Delay) type flip-flop
2. T-type flip-flop
3. Toggle Switch
4. 2 or 3 above

Ans:

T-type Flip Flop

Question - 67:

Tell me why the feeding frequency to a microprocessor is twice the operating frequency?

Ans:

In 8085 there is an internal circuit wich devides the frequency feeded by external device by two.. 8085 operating frequency is 3MHZ we have to feed 6MHZ to it

Question - 68:

Why FET is known as voltage control device?

Ans:

Since in an FET the value of the current depends upon the value of the voltage applied at the gate and drain so it is known as voltage controlled device.
For example: In a MOSFET, the current from drain to source depends upon the width of the depletion layer which in turn depends upon the voltage applied on the gate so that is the reason.

Question - 69:

What is the length of IR(Instruction register)
1. 6 bits
2. 8 bits
3. 12 bits
4. 16 bits

Ans:

Length IR depends on type arch we are using 8085 it's 8 bits in 8086 16 bits and in mips we have 32 and 64.

Question - 70:

Which of the following remarks about BDC is true?
1. it is an 8-4-2-1 weight code
2. complement of a number can be found efficiently
3. (12345678)10 needs 4 bytes in BCD representation
4. conversion to and from the decimal system can be easily done

Ans:

1,3,4 are correct options Because BCD is 8-4-2-1 weighted code, whose complement cannot be found easily, given number requires 4 bytes as it is 8 digit number (4 bits for number), it is easily converted to binary.

Question - 71:

What problem arise if we use regulators without/before filters?

Ans:

Filters are used for reducing ripples. A regulator output will be having many ripples. So filters are used in a circuit for conversion of pulsating AC to DC

Question - 72:

What is the addressing mode used in the instruction PUSH B is
1. direct
2. register
3. register indirect
4. immediate

Ans:

Push is used to write into stack
1. This is not direct we are not mentioning address here
2. It's not register indirect we are not mentioning reg which contain address
3. It's not immediate we are not storing immediate value
so answer is 2 it's register addressing

Question - 73:

What are potential transformers?

Ans:

Potential Transformer is designed for monitoring single-phase and three-phase power line voltages in power metering applications. The primary terminals can be connected either in line-to-line or in line-to-neutral configuration. Fused transformer models are designated by a suffix of "F" for one fuse or "FF" for two fuses. A Potential Transformer is a special type of transformer that allows meters to take readings from electrical service connections with higher voltage (potential) than the meter is normally capable of handling without at potential transformer.

Question - 74:

Where will Digital and Analog technology come into play in the CCTV technology in terms of data storage?

Ans:

Data storage is mostly digital now-a-days because of cost,density,ease. CCTV or anything it may be, digital data is stored in ROM (Read only Memory) or EPROM (Erasable and Programmable ROM) or Flash memory. All of these include the same technology of storing digital information using transistors,capacitors.

Question - 75:

How to identify how many states the ripple counter is having by looking at the figure as it can also have some invalid states?

Ans:

If in the ripple counter, there are 3 flip flops, it is a mod-8 counter which counts from 0-7(binary). If additional circuitry is used, then it is a counter where few states have been trapped. Usually this is done by connecting a Nand gate output to the clear inputs of all the flip flops in a ripple counter. The clear signal is a active low signal and hence clears the flip flops to 000 when the output of the Nand gate goes low. The inputs to the Nand gates come from the flip flop outputs when they represent the count which we need to eliminate.
For ex: If a mod-8 counter is to be altered to count from 000-011 (0-6), i.e., we need to build a mod-7 counter from a mod-8 counter. To do this, we need to clear the counter to 000 once the count reaches 7. In effect, the counter needs to count from 0-6 and recycle back to 0. To do this connect the outputs of the flip flops which go high on a count of 7. This makes the output of the Nand gate high when a count of 7 is attempted, and hence clears the count back to 000.

View All Answers

Question - 76:

Explain which oscillator is best for general purpose?

Ans:

Oscillators generate a frequency it should be noted that it does not create energy, but nearly acts as an energy converter.

View All Answers

Question - 77:

What is the difference between Circuit Switching and Packet Switching?

Ans:

Circuit switching is the transmission technology that has been used since the first communication networks in the nineteenth century. In circuit switching, a caller must first establish a connection to a callee before any communication is possible. During the connection establishment, resources are allocated between the caller and the callee.
packet switching is a more recent technology than circuit switching which addresses a disadvantage of circuit switching: the need to allocate resources for a circuit, thus incurring link capacity wastes when no data flows on a circuit. Packet switching introduces the idea of cutting data on a flow into packets which are transmitted over a network without any resource being allocated.

View All Answers

Question - 78:

In a ripple counter using edge-triggered JK flip-flop. the pulse input is applied to the
1. clock input of oll flip-flops
2. clock input of one flip-flop
3. J and K input of one flip-flop
4. J and K input of all flip-flops

Ans:

2. clock input of one flip-flop (first)

View All Answers

Question - 79:

What are the advantages of using C band for satellite communication?

Ans:

"Better performance under adverse weather conditions"

View All Answers

Question - 80:

How to Convert Binary to Excess 3 Code and vice verse?

Ans:

A number i binary can be converted to excess-3 just by adding the binary equivalent of 3 to the binary number.similarly a number in excess-3 can be converted to binary just by subtracting the binary equivaent of 3 from the binary number.

View All Answers

Question - 81:

Explain why vestigial side band is used in TV Signal Transmission?

Ans:

Actually Double Side band transmission is not wasting any data while traonsmission. But the problem with DSB is its bandwidth required is more. SSB requires less bandwidth. But there is no practical device exactly cut the sidebands and low frequency part contains important information. Therefore VSB (Vestigeal Side Band) transmisson is preferred

View All Answers

Question - 82:

Explain why making capacity of the circuit breaker is higher than breaking capacity?

Ans:

Making capacity is the max fault current it can carry during closing of breaker, e.g. You are closing a breaker on fault. The making capacity is always higher because it is expressed in peak value not rms, and also because of the DC offset, voltage and PF while closing

Question - 83:

Tell me why do we convert Frequency Domain to Laplace Domain?

Ans:

Frequency domain ----> deals with jw
Laplace domain ----> deals with s, but s = (sigma) + (jw)
so with sigma = 0, laplace domain and frequency domain are the same.
We convert time domain to either laplace domain or frequency domain to
study various signal processing system properties.
For example: A RLC circuit can be tested for stability using laplace domain techniques.
    We find the closed loop differential equation and transform it into laplace
    domain. By relating the input and output, we find the closed loop transfer
    function. By locating the position of poles from the obtained s-domain
    function, we can assess stability of the circuit.

Question - 84:

What is Circuit switching?

Ans:

Circuit switching is the transmission technology that has been used since the first communication networks in the nineteenth century. In circuit switching, a caller must first establish a connection to a callee before any communication is possible. During the connection establishment, resources are allocated between the caller and the callee.

Question - 85:

The Cost of storing a bit is minimum in
1. Cache
2. Register
3. RAM
4. Magnetic tape

Ans:

Magnetic Tape

Question - 86:

Explain why the aspect ratio of TV video display is 4:3 or 16:9? Why not it is any other?

Ans:

In TV it is conviniance to appear the object in horizontal manner, so it is better to fix the horizontal lengh more than vertical. 4:3 and 16:9 are the suitable lengths for human naked eye.

Question - 87:

Do you know Q-Meter works on which principal?

Ans:

A direct-reading instrument which measures the Q of an electric circuit at radio frequencies by determining the ratio of inductance to resistance, and which has also been developed to measure many other quantities. Also known as quality-factor meter.

Question - 88:

Explain what are edge triggered flip flop and level triggered flip flop? How do they differ from one another?

Ans:

Edge triggered flip flop are of two types
1. Positive edge triggered flip flop-In a pulse train when ever the input is changing its state from negative edge to positive edge then it will be considered as logic 1 otherwise it is 0
2. Negative edge triggered flip flop-same as above but reverse.
LEVEL TRIGGERED FLIP FLOP are two types
1. Positive level triggered flip flop-in a pulse train when ever the pulse is high then it will be logic 1 otherwise it is zero.
2. Negative level triggered flip flop-in a pulse train when ever the pulse is low then it will be logic 1 otherwise it is zero.

Question - 89:

How many characters per sec (7 bits + 1 parity) can be transmitted over a 2400 bps line if the transfer is synchronous (1 start and 1 stop bit)?
1. 300
2. 240
3. 250
4. 275

Ans:

start an d stop bits are not needed so it is 2400/8=300

View All Answers

Question - 90:

Explain what type of architecture is used in 8085 microprocessor?

Ans:

INTEL 8085 is a 8-bit microprocessor.
It's based on Von-Neumann architecture in which the data and instructions are in the same memory space without any distinction between them.
Data line: 8-bits--Can process 8-bits of data at a time.
Address line: 16-bits--Can address upto 2^16(64KB) of address space.

View All Answers

Question - 91:

74LS244 is _____?

Ans:

Latch Multiplexer

View All Answers

Question - 92:

What is a sequential circuit and What is a combinational circuit?
Is there any difference between them? If yes what is it?

Ans:

A sequential circuit uses flip flops. Unlike combinational logic, sequential circuits have state, which means basically, sequential circuits have memory.
The main difference between sequential circuits and combinational circuits is that sequential circuits compute their output based on input and state, and that the state is updated based on a clock. Combinational logic circuits implement Boolean functions, so they are functions only of their inputs, and are not based on clocks.

View All Answers

Question - 93:

Explain what is the main application of scr in electronic field as well as in software field?

Ans:

SCR has many uses in the field of electronics,namely it can be used for varied purposes from filtering, rectifying to high power switching.
it is also used in soft starters for motors and in choppers.
apart from these scr has many other uses in power electronics.

View All Answers

Question - 94:

How to format a memory card by using memory card?

Ans:

Connect your mobile to computer through data cable or through card reader. Right click on memory card click on format.

View All Answers

Question - 95:

What is Biasing?

Ans:

Biasing is the minm. amt of DC voltage applied across pn junction (diode / transistor)to over come the potential barrier........Amt of biasing can be in order to achieve optimum performance.....

View All Answers

Question - 96:

The output of the rectifier pulsating in nature, it consists of a desired DC component of voltage and unwanted ripple components. These ripple components are removed by placing filter circuit at the output of the rectifier.
Types of filters:
1. capacitor filter
2. series inductor filter
3. LC filters of following two types
 (a)capacitance input filter
 (b)inductance unput filter
4.RC filters.

Ans:

Filters are used to remove the unwanted or undesirable components of a output
waveform, so the basic work of filters is to smoothen the output.
From electrical devices we
are not getting perfect sinusoidal output, it contains a DC component i.e.
ripples, harmonic distortions etc. so filters are used to rectify these
components.

Question - 97:

Explain what is meant by virtual ground in the op amp?

Ans:

The op amp connected in a negative feedback configuration, that is the o/p connected to the inverting terminal, tried to produce the same voltage at the inverting node as we applied to the non-inverting terminal, no matter whatever be the o/p. This happens because the opamp has a very high differential gain. so only way to not to clip or saturate the o/p in either positive or negative side is to make their both i/ps at the same potential. so when you apply the i/p to the inverting terminal and you connect the feedback to the inverting node, and your non-inverting terminal is grounded, then op amp tries to force the inverting node at the ground potential and whatever the difference between these two nodes are amplified.

Question - 98:

Why are the 2 input terminals of an op-amp are called as inverting & non-inverting terminals?

Ans:

An input applied to the inverting terminal of an Op Amp provides an amplified output which is 180 degrees out of phase with respect to the input, whereas the non-inverting terminal input provides an output which is in phase with the input.

Question - 99:

How the active power factor correction changes the wave shape of current drawn by a load to improve the power factor?

Ans:

Please share your answers.

Question - 100:

Explain what is angle and amplitude modulation? what is noise in modulation?

Ans:

modulation means change. to send a message of low frequency to a far distance we use a carrier of high frequency to carry the message. while transfering we change some parameters of carriers for faithful tranformation of message signal. if the amplitude of the carrier is varied in accordance with frequency of message signal then it is called amplitude modulation. if either phase or frequency is changed in accordance with the frequency of message signal then it is called angle modulation. noise is an unwanted signal which enter in signal while transfering a signal and makes the signal distorted.

Question - 101:

What type of Television Communication is used in India?
a) NTSC
b) PAL
c) SECAM
d) NSTC

Ans:

In India we use PAL system (Phase Alternating Line), as we have our system frequency is 50 Hz. And for vertical scanning we need this 50Hz reference.
In America and Canada they use NTSC system (National Television System Committee) as their system frequency is 60 Hz

Question - 102:

Which of the following is is used to hold ROM and RAM cards
1. Computer Bus
2. Expansion cards
3. Mother Board
4. Cache memory

Ans:

3. Mother Board

Question - 103:

Why the antenna is called passive element?

Ans:

Device which are not require any external voltage(Biasing) for its operation is called Passive device or Device without junction is called Passive device. Antenna is a without junction device as well as these no external voltage required for its operation. So antenna is a Passive device.

Question - 104:

Give here your suggestion about microprocessor 8085 and 8086. These 2 processors used in old time. I want to know its program execution time, memory space?

Ans:

8086 has 20 address lines and 16 data lines and supports HARVARD architecture as compared to 8085 which has 16 address lines and 8 data lines, so 8086 has higher index and thus accessing large memory, also the operating speed of 8086 is greater due to presence of instruction queue.

View All Answers

Question - 105:

What is automation industries main category and sub category?

Ans:

Please share your answers.

View All Answers

Question - 106:

What is difference between Microprocessor and Micro controller?

Ans:

A microprocessor has its interfacing components off the chip.
A micro controller is a microprocessor that is connected to its interfacing components on a single chip..This facility saves a lot of time..

View All Answers

Question - 107:

Tell me, when a sample of germanium and silicon having same impurity density are kept at room temperature then Resistivity of silicon will be higher than that of germanium, Why?

Ans:

The answer is simple. Consider the PN diode for Ge 0.3eV is the breakdown voltage and in the case of Si its 0.7eV since the impurities are added in the same amount the bond due to the other atoms of the Si makes it resistive compared to the Ge.. thats all!

View All Answers

Question - 108:

Why are using 4ma to 20ma for signal transfer. Why not 0 to 20ma?

Ans:

Because we cannot detect open loop if 0-20 is used.

View All Answers

Question - 109:

What electronics are involved to build a device like a guitar tuner where you press a button to get a specific tone?

Ans:

Please share your answers.

View All Answers

Question - 110:

How does a Signal differ from a Wave?

Ans:

Signal means information. Wave is something that carries the information from source to destination.

View All Answers

Question - 111:

What is the difference between masking and non-masking?

Ans:

In 8085 processor TRAP is a non maskable interrupt.
Whereas RST 7.5,6.5,5.5, intr are maskable interrupts.
Maskable means this interrupts can be left without considering during the execution of the program.
Non maskable depicts that it has to be taken into account during the execution of the program

View All Answers

Question - 112:

Tell me why gold is added to the p-n junction?

Ans:

To reduce the recombination time.

View All Answers

Question - 113:

Explain what is the main difference between 8085 and 8086 processors?

Ans:

The 8085 is a 8bit processor & the 8086 is a 16bit processor. In 8085 we can't do Multiplication or division by using single instruction but in 8086 we can do that. So that we may know that the 8086 is the superior version of 8085.

View All Answers

Question - 114:

What is the difference between latch and flip flop?

Ans:

flip flop is edge triggered,where as latch is level triggered.gate is used as control signal in latch.In FF clock is used as control input.

View All Answers

Question - 115:

In VLSI chip 1000s of transistors are dropped, specifically categorized. Which method is used to achieve this & how it is done practically?

Ans:

Please share your answers.

View All Answers

Question - 116:

How rectangular filter are practically made?

Ans:

Please share your answers.

View All Answers

Question - 117:

What is CMOS Transistor?

Ans:

Complementary metalâ€"oxideâ€"semiconductor (CMOS), is a major class of integrated circuits. CMOS technology is used in chips such as microprocessors, microcontrollers, static RAM, and other digital logic circuits. CMOS technology is also used for a wide variety of analog circuits such as image sensors, data converters, and highly integrated transceivers for many types of communication.
CMOS is also sometimes explained as complementary-symmetry metalâ€"oxideâ€"semiconductor. The words "complementary-symmetry" refer to the fact that the typical digital design style with CMOS uses complementary and symmetrical pairs of p-type and n-type MOSFETs for logic functions.
Two important characteristics of CMOS devices are high noise immunity and low static power supply drain. Significant power is only drawn when its transistors are switching between on and off states; consequently, CMOS devices do not produce as much heat as other forms of logic such as TTL (transistor-transistor logic). CMOS also allows a high density of logic functions on a chip.
The triple compound "metalâ€"oxideâ€"semiconductor" is a reference to the nature of the physical structure of early (and interestingly now, the very latest) field-effect transistors, having a metal gate electrode placed on top of an oxide insulator, which in turn is on top of a semiconductor material. Instead of metal, current gate electrodes (including those up to the 65 nanometer technology node) are almost always made from a different material, polysilicon, but the terms MOS and CMOS nevertheless continue to be used for the modern descendants of the original process. (See also MOSFET.) Metal gates have made a comeback with the advent of high-k dielectric materials in the CMOS transistor as announced by IBM and Intel for the 45 nanometer node and beyond

View All Answers

Question - 118:

Explain what are the main advantages of synchronous circuit?

Ans:

Synchronous circuits have common clock and operate utilizing the same. Whereas a aynchronous circuits have different clock frequencies and operate without mutual co-ordination.

View All Answers

Question - 119:

What is a BCD? What are its advantages and disadvantages? Why is an excess-3 code is called an unweighted code?

Ans:

BCD means Binary coded decimal, its advantage is it can represent decimal numbers in the form of binary value says (0000-0 to 1001-9).
Binary codes are divided into weighted binary code and non weighted binary code,
Excess 3 code is an example of non weighted codes since the position of each bits in excess 3 code does not have weights says like ones, tens, hundred in decimal and $2^0, 2^1, 2^2$, in binary.

View All Answers

Question - 120:

Tell me why BJT is called current control device?

Ans:

Because the input current of the transistor controls the output current, for example in CE configuration base current Ib controls the output current Ic.

View All Answers

Question - 121:

What is the difference between emulator and simulator?

Ans:

simulator is just software which act like a hardware.inside that u can see all the electonics component ,u can connect thenm in different manner and can simulate o/p as well as normal hardware do.emulator is actual hardware before performing test on real kit we can test on emulator which is exact copy of real kit on which we r willing to work.

View All Answers

Question - 122:

Explain what is the purpose of the package around a microprocessor silicon die?

Ans:

Packages provide protection to the silicon die from the elements like radiation temperature moisture etc.
It is also required to form the body of the device which will eventually help in interfacing it to a system.

View All Answers

Question - 123:

Design a digital circuit which has one input two output and one select line
input should be 1000khz
output should be 500khz and 250Khz
select line either 0 or 1
if 0 select 250khz
if 1 select 500khz?

Ans:

1000kHz (input) to a DEMUX with a Select line.
1st output connected to D Flipflop (acts as divide by 2) thus 500kHz.
2nd output connected to TWO D Flipflops (acts as divide by 4) thus 250kHz.

View All Answers

Question - 124:

In connections of MCB, is it necessary that the incoming side supply should be connected at top side of MCB.
Whether this has any effect in tripping of MCB in case of fault?

Ans:

Please share your answers.

View All Answers

Question - 125:

What is the meaning of Tristate Signal in Electronics?

Ans:

In Digital two states known as '0' & '1'. Apart from these two we have another state that known as "Tristate".
i.e. In digital '0' for 0V to max of 0.4 to 0.8 V. '1' is taken account if it is minimum of sum 2.4V to max 5.0V. In between these 0.8V to 2.4V is known as "Tristate".

View All Answers

Question - 126:

What is Fbus protocol and its use?

Ans:

Please share your experience.

View All Answers

Question - 127:

Which of the following is not an input device
1. MICR
2. OCR
3. DVD
4. JOYSTICK

Ans:

OCR

View All Answers

Question - 128:

Explain what does CE mean..U will see it on almost every chip(IC)?

Ans:

The CE mark is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives. The letters 'CE' are an abbreviation of Conformité Européenne,
French for European conformity. The CE mark must be affixed to a product if it falls under the scope of the approx. 20 so called 'New Approach' Directives. Without the CE marking, and thus without complying with the provisions of the Directives, the product may not be placed in the market or put into service in the fifteen member states of the European Union and Norway, Iceland and Liechtenstein. However, if the product meets the provisions of the applicable European Directives, and the CE mark is affixed to a product, these countries may not prohibit, restrict or impede the placing in the market or putting into service of the product.
Thus, CE marking can be regarded as the products trade passport for Europe. The CE mark is not a quality-mark. First, it refers to the safety rather than to the quality

of a product. Second, most quality markings are voluntary opposite to the CE marking, which is mandatory for the products it applies to. CE indicates conformity with mandatory European safety requirements. European conformity is certified by following clear and understandable procedures, the so-called â€˜conformity assessment procedures'

View All Answers

Question - 129:

If a clock with time period T is used with n stage shift register,
the output of the final stage will be delayed by
1. nT seconds
2. (n-1)T seconds
3. n/T seconds
4. (2n-1)T seconds

Ans:

nT seconds

View All Answers

Question - 130:

Explain why the input impedance of OP-Amp is so high?

Ans:

In OPAMP, we have 4 stages, 1st stage, i.e the input stage is a dual i/p balanced o/p opamp whose i/p resistance is v high. and if we use FET in case of BJT for 1st stage diffamp, then i/p resistance will be v high in M ohms.

View All Answers

Question - 131:

What is cache coherency and snooping

Ans:

Please share your answers.

View All Answers

Question - 132:

Motorolas 68040 is comparable to
1. 8085
2. 80286
3. 80386
4. 80486

Ans:

the answer is 80486

View All Answers

Question - 133:

What is Virtual Grounding?

Ans:

In electronics, a virtual ground (or virtual earth) is a node of a circuit that is maintained at a steady reference potential, without being connected directly to the reference potential.

View All Answers

Question - 134:

What is Interfacing?

Ans:

The peripheral (simple input/output devices) connected with computer to perform tasks is known as interfacing.

View All Answers

Question - 135:

Which one is faster between NAND-SR FF and NOR-SR FF?

Ans:

well both deals with same principle.but i think NAND-SR FF is faster than NOR-SR FF

View All Answers

Question - 136:

What are digital electronic flip flops, State the different types of flip flop and their uses?

Ans:

digital electronic flip flops are temporary single bit storage devices.different types of flip flops are JK f/f, RS f/f, T F/F, D f/f this flip flops are using as storage device, delay purpose , as counter , for toggled, as shift register etc

Question - 137:

Explain how micro processor works without internal memory?

Ans:

microprocessor works without internal memory because ,it consists of adreess,data and control buses with some registers to process the task given to processor through the external memory.

Question - 138:

What is Pulse Width Modulation?

Ans:

Pulse width modulation is a modulation technique in which the width of the pulse is varied in accordance with the message signal. Pulse width Modulation is abbreviated as PWM.
PWM can be used to reduce the total amount of power delivered to a load without losses normally incurred when a power source is limited by resistive means. This is because the average power delivered is proportional to the modulation duty cycle. With a sufficiently high modulation rate, passive electronic filters can be used to smooth the pulse train and recover an average analog waveform.
PWM is used in sound synthesis circuits.

Question - 139:

What is the operating voltage of laser?

Ans:

There is no particular operating voltage for the operation of laser. Small voltage is enough to glow that laser, the principle of laser is the excitation of atoms from lower state to higher state. For playing purpose of laser the desired voltage is 3V. Lasers are also used for medical and Industrial pupose, those lasers are highly intensive and powerful, generally those operating voltages are about 200V to 2kV

Question - 140:

What is RTOS?

Ans:

RTOS is a real time operating system. the main difference between an operating system and RTOS is the response time.
An operating system will or may response for the user input at any time.... But a RTOS should response for the input with in a finite time. it should not delay like an ordinary operating system. Thats why in many electronic applications RTOS is used...

Question - 141:

Explain what is difference between Fixed-Bias Circuit & Self-Bias Circuit?

Ans:

Fixed bias circuits get their bias voltages from independently designed reference voltage sources (or even something as simple as a voltage divider). Often is the case that the bias may be left for the end-user to give some control over the operation point of the circuit.
Self biased circuits get their bias voltages from the circuit itself, often in the form of a negative feedback. This is very useful when a circuit is extremely sensitive to bias points and it becomes impractical to provide external biases that are correct to very high accuracies. This can happen in high gain amplifiers with very high impedance output nodes, such as a common source amplifier with an active load. The operation of the circuit dependson the bias of the active load. It would therefore be desirable to sacrifice some of this gain by providing a negative feedback from the output to the gate of the active load. This way, you wont have to bias the circuit yourself, but will lose some of the gain of the circuit as a price.

Question - 142:

Explain how to design a software IC using VHDL?

Ans:

you can use software like altera, write the required programme download to the chip,here is your software ic

Question - 143:

Explain what is the difference between PLC and DCS?

Ans:

PLC means Programmable Logic Controller, which can be used to control one particluar control system such as a boiler or a injection system.
but DCS is Distributed control syetem, which is used to monitor and control the total process plant. in DCS we have no of controllers connected to a single monitoring system.

Question - 144:

How many states does signal has?

Ans:

as i think,basically there are 3 states in a signal: on state, off state, tri state

View All Answers

Question - 145:

What is the equivalent of negative logic AND gate?

Ans:

Negative Logic equivelent of AND gate is OR gate.

View All Answers

Question - 146:

What frequency bands are used in Satellite Communication?

Ans:

C band

View All Answers

Question - 147:

The function of a transistor used in any of the ICs is to perform SWITCHING action and not AMPLIFICATION.
Then why DIODES are not used instead of TRANSISTORS as diodes also exhibit the same switching action?

Ans:

I agree Digital ICs use transistors as switches. But Analog (Linear) ICs Do Use transistors as Amplifiers. Consider the differential pair of transistors that form the front end of an op amp. The advantage of transistors over diodes, is that transistors have a control input and diodes do not. You can use the bipolar transistor's base input (or the gate input of a CMOS transistor) to control a larger current with amplification, or overdrive to turn On/Off.

View All Answers

Question - 148:

Why does sidebands vl come in case of analog modulation?

Ans:

Please share your answers.

View All Answers

Question - 149:

Can we get light when the circuit is working?

Ans:

LED works in micro Amps to few miliamps only, whre usually rectifier flown electrical current in way larger Amps (from few Amps to thousands Amps).

View All Answers

Question - 150:

Why cannot we use LEDs for rectification purpose?

Ans:

LED is not designed for resctifier purpose, even though theoritically it can be use, but the nature of the current flow capacity of LED is not suitable to be used as reactifier.

View All Answers

Question - 151:

In a binary data sequence, the duration of symbol 0 or 1 is 1ms. If a carrier of freq 4khz is used in ASK, What is the minimum transmission bandwidth required?
What is min bandwidth?

Ans:

Please share your experience.

View All Answers

Question - 152:

What is Transponder? Give the difference between Transducer and Transponder?

Ans:

Transducer is a sensor while transponder is an amplifier.

View All Answers

Question - 153:

How to measure frequency without CRO?

Ans:

We can also measure frequency by Frequency meter and frequency analyzer.

Please check it out.

View All Answers

Question - 154:

What is the Value of binary number with n digit, all of which are unity?
a) 2 to the power n
b) 2 to the power (n-1)
c) (n square) - 1
d) (2 to the power n) - 1

Ans:

The answer is D
For eg. consider 1111 which has 4 digits
$2^4=16$
$(2^4)-1=15$

View All Answers

Question - 155:

Explain at what voltage does land line telephone operate?

Ans:

The normal telephone system works on -48vDC on hook when the phone goes off hook, the voltage drops to about 10v but reverses polarity.

View All Answers

Question - 156:

Explain why does all cellular networks have same shape of SIM? Why is it designed in such a particular shape? Does it have any other shape?

Ans:

All SIM are of same shape because cellular phones when manufactured in industries, didn't know that which SIM the customer is going to use. It has to be universal so that the cellular phones can be used with any network connection SIM.

View All Answers

Question - 157:

Tell me how to calculate knee point voltage? Describe its purpose for differential protection

Ans:

10 % increase in voltage gives you 50 % increase in excitation current is called knee point voltage. To measure this first demagnetise the CT and apply voltage gradually from secondary keeping primary winding open circuited. while doing this above phenomeneo will be observed.

View All Answers

Question - 158:

Tell me why is 400 Hz used for flight instruments and Radio Transmission System in Aviation Industry universally?

Ans:

You need some sort of AC for power transmission and distribution inside of aircraft. Power companies use 50/60Hz because any higher frequency results in excessive inductive and capacitive losses, given the many miles that have to transfer power over. But a higher frequency gives you lots of advantages in transformer and motor weight, and over the short distances in an aircraft, the inductive and capacitive losses are not excessive. So overall, the higher frequency saves weight, and for aircraft, that is important. Like all designs, the choice of 400 Hz is a compromise between losses and low weight.

View All Answers

Question - 159:

Noise with uniform power spectral density of N0W/Hz is passed through a filter H (w) = 2 exp(-jwtd) followed by an ideal low pass filter of bandwidth BHz. What is the output noise power in Watts?

Ans:

Please share your answers.

View All Answers

Question - 160:

A DVST monitor
1. cannot display colour
2. can display 4 colour
3. can display 3 colour
4. can display many colour

Ans:

Cannot Display colour

View All Answers

Question - 161:

What is selective flooding?

Ans:

Flooding most often occurs when a large enough number of packets (the droplets in a stream of data) are flowing through the network that regular data cannot be sent in a normal speed and fashion. Generally it a packet/response of syn/ack or synpackets: the intialization of connections between 2 tcp/ip hosts requires a set of back and forth responses eg. "hey, are you there?" "yes, I'm here." "Are you ready to receive data?" "yes I am, go."
A synflood consists of something like that horrible Verizon Mobile commercial - "Can you hear me now? Can you hear me now? Can you hear me now? Can you hear me now? Can you hear me now? Can you hear me now?....." you get the idea. Synflood hosts don't respond to the "yes" back from destination, they keep just asking over and over. The faster the flood, the slower the network and computers on the network will run. There are people who take remote control of a large number of pcs (a zombienet or bot-net) and use these to flood the victim with even larger numbers of syn packets. They get control usually by malware (viruses or trojans) and often can't be traced.
Innocent flooding can occur when a router is given a circular route to some of the hosts on the network - the router asks for the response from a certain host and another router says 'I know where that is.. it's (another interface on the first router)' and passes the requst to router 1, who then passes it again to router 2, who sends it to router 1, who sends it to router 2 ..... using protocols to test for and close internal loops in a network will most often stop flooding.

View All Answers

Question - 162:

Tell me In a MOSFET, What does the pinch off voltage refers to?

Ans:

Pinch off voltage is the excess voltage Vds applied which limits the current flowing into drain.. at that point the current saturates...and the o/p current remains constant.

View All Answers

Question - 163:

What is the importance of the biasing in transister circuits?

Ans:

As transistor is using as amplifier the operating point should be stable, in operating transister the temperature can fluctuate operating point, there by to avoid operating point fluctuation some mechnism must be used, this mechanism can be called as biasing.

View All Answers

Question - 164:

Why we need biasing for Transistor, FET and MOSFET?

Ans:

Basically transister contains active region, saturation, cut off region. In saturation and cutt of region transister is used as a switch. To use transister as amplifier the operating point should be in exact middle of the active region.

View All Answers

Question - 165:

Tell me what is Race Around Condition in a JK FlipFlop? How it can be avoided?

Ans:

When the input to the JK flip-flop is j=1 and k=1, the race around condition occurs, i.e it occurs when the time period of the clock pulse is greater than the propagation delay of the flip flop. so the output changes or toggles in a single clock period. If it toggles even number of times the output is same but if it toggles odd number of times then the output is complimented. To avoid race around condition we cant make the clock pulse smaller than the propagation delay so we use
1. Master slave JK flip flop
2. Positive or negative edge triggering
Since the hardware cost of msjk is more edge triggering is preferred to msjk.

View All Answers

Question - 166:

We take the area of collector wide comparison to base and emitter. Why?

Ans:

Emitter, base and collector are the three terminals of a transistor. Emitter emits majority carriers and is highly doped. Collector collects these majority carriers after the majority carriers reach base. Base is lightly doped region. As the collector is reponsible to collect majority carriers injected from the emitter it should have sufficient power handling capacity. This emphasises the need for largest area of capacitor.
Also area and doping of the base should be lowest because most of the carriers it obtains from the emmiter should contribute towards conduction.

View All Answers

Question - 167:

Explain what is the difference between inductance and resistance?

Ans:

RESISTANCE:It is the property of the material by which it opposes the flow of current through it. the resistance is denoted by r and measured in ohms.
INDUCTANCE: It is the element in which energy is stored in the form of electromagnetic field. The inductance is denoted by l and measured in Henry
View All Answers

Question - 168:

Tell me can a gas be used for conducting current?

Ans:

Yes, Gas need to be ionized, like in fluorescent lamps, flash bulbs etc.

Question - 169:

Explain what is the difference Allen Bradley and Siemens plc

Ans:

allen bradley plc software can use for programming offline otherwise siemens software can`t use in offline only use in online mode

Question - 170:

Explain the output of the lexical analyser is
1. a set of regular expressions
2. syntax tree
3. set of tokens
4. string of characters

Ans:

3. set of tokens

Question - 171:

Which of the following are used to display measured quantity by digital meter?
LED,
LCD,
CRO?

Ans:

CRO

Question - 172:

Explain how does frequency affect the size of smps?

Ans:

If frequency of SMPF is reduced capacitor size is increased SMPF size also increased.

Question - 173:

What is the formula for power gain when input gain & output gain is given?

Ans:

Power gain=Output power/Input power

Question - 174:

Tell me why the shape of OP-AMP is triangular not other shape?

Ans:

The Triangular shape symbolizes that it works for continous signals and hence forth it is an analog device.
ex: Opamp
If it is square then it is digital device.
ex: Multiplexer
If the shape is both triangular and square then it is mixed signal device.
ex: ADC, DAC

Question - 175:

Explain how to convert binary to gray code and vice-verse?

Ans:

for eg: code is 1101
this must be convert binary to gray then first 1 written as it is, 1 XOR 1
,1 XOR 0, 0 XOR 1.
then the gray code is 1 0 1 1

Question - 176:

How to design binary to gray code converter?

Ans:

It is easy to convert the binary number to gray number. First, for example take a binary number i.e ,101101.
Step 1: 101101 first write the MSB as it is i.e, darken bit i.e, 1

Step 2: add MSB and bit next to the MSB i.e, 1+0=1
Step 3: again add 0 and 1 we get i.e, 0+1=1
Step 4: again add 1 and 1 we get 1+1=0
Step 5: in previous step carry is occurred so neglect that carry . note that don't add carry to next add numbers
then again add 1+0 1+0=1
step 6: add 0+1 0+1= 1
Answer: Gray Code is : 111011

<u>View All Answers</u>

Question - 177:

When a small amount of Cu is added to a Ni conductor, then the?
a) Resistivity of Ni will decrease at all temperatures because Cu is better conductor than Ni
b) Residual resistivity of Ni at low temperatures will increase as Cu atoms acts as defect centers
c) Resistivity of Ni will increase at all temperatures as Cu destroys the periodicity of Ni and acts as defects
d) Resistivity of Ni remains unaltered as Cu atoms give the same numbers of free electrons as Ni atoms

Ans:

c) Resistivity of Ni will increase at all temperatures as Cu destroys the periodicity of Ni and acts as defects

<u>View All Answers</u>

Question - 178:

How to program Micro controller?

Ans:

A Micro controller can be directly connected to external devices. But a Processor needs a interface controller to connect with external input and output devices.

<u>View All Answers</u>

Question - 179:

What is Micro controller?

Ans:

Micro controller = micro processor + memory + interfacing features(ports) + additional features like counters.

<u>View All Answers</u>

Question - 180:

Explain why do you use two ground pins in microprocessor 8086?

Ans:

Two ground terminals are provided to make the pin structure symmetrical o/w it requires only 39 pins.

<u>View All Answers</u>

Question - 181:

Explain how to measure the insulation resistance for printed circuit boards?

Ans:

Because opamp having high input impedance due to differential amplifier connected at the input side which is in the range of MEGA ohms and low output impedance due to power amplifier used at the output stage of opamp.
Basically saying as opamp having high input impedance and low output impedance opamp shape shown by triangle.

<u>View All Answers</u>

Question - 182:

How to increase the gain and directivity of an antenna?

Ans:

By increasing no of director, we can increase gain.

<u>View All Answers</u>

Question - 183:

Tell me what is Memristor? How many modes it works? Also what is its Advantage? How It differ from others & why the name evolve? & What is its Uses?

Ans:

Memristor is a contraction of Memory Resistor it means that its store the value based on amount of Charge Has Passed through on the applied previously applied voltage it was postulated by Leon Chua from now 41 years ago and it is a 4th fundamental missing element now it can be considered as companion to RLC it gives the relation between Flux and Charge it is formally defined as rate of change of Flux with respect to Charge.

<u>View All Answers</u>

Question - 184:

Explain is RFID in developing stage? What is scope in RFID?

Ans:

RFID transponder is a special kind of radio transmitter and reciever. It is activated when it receives a signal of a specific kind. RFID transponders are present in smart cards and Radio Frequency Identification tags.

Question - 185:

Tell me does area of work only involve closed spaces?

Ans:

No. Telecommunications equipment are sometimes scattered on a wide area (as one example), so you'd probably find the need to check for interference using a spectrum analyzer, etc.

Question - 186:

Explain with examples of circuit protecting device apart from fuse, circuit beaker, relays, lighting arrestor, switch gears?

Ans:

This question is not any kind of technical question but if it has been asked in interview the
we can say that
1) ground wire
2) insulators
can be said as the circuit protection device

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