

- 1) Moore model of DFF?
- 2) Which of the following filter has steep roll-off characteristics?
(A) Butterworth filter (B) Chebyshev filter (C) Bessel filter (D)--
ans: B
- 3) The architecture of DSP processor-----
(A)Harvard (B) Von neumann (C)...(D)..
ans: A
- 4) If the input frequency to a 6 stage ripple counter is 1000MHz then output frequency at 6th stage_____
- 5) Minimum number of 2 input NAND gates required to realise the fn. $AB'+CD'+EF'$
ans: 6
- 6) What will exit() fn. in C will do?
- 7) goto command in C will cause the program to jump to----
ans: Label
- 8) VSWR is given then asked to find out reflection coefficient
- 9) The relation between power in FM signal and modulation index-----
- 10) If two signals are AM modulated with modulation indices of 0.3 and 0.4 what will be the modulation index of combined signal?
ans: Calculate using $1/M=(1/m1)+(1/m2)$
- 11) If n stage pipelining is used in a processor, then what will be the speed improvement over nonpipelined processor?
(A) same (B) n (C) n! (D) 2n
- 12) One circuit is given (That was a Voltage Doubler using op-amp) and asked to Identify that...
- 13) Which one of the following memory has fastest write time?
(A) Flash (B) EEPROM (C) EPROM (D) None of these
- 14) In EEPROM data is stored in____
(A) Cross coupled Latch (B) Capacitor (C) floating gate transistor (D)--
- 15) Which technology is faster?
(A)Bipolar (B) MOS (C) CMOS (D) ..
- 16) Memory access time, cache access time, hit ratio are given, Asked to find out Average memory access time
- 17) If the probability of getting a job for A is $1/3$ and the probability of getting a job for B is $1/4$ then the probability of getting a job for A or B will be_____?
- 18) One transfer fn $As^4 + Bs^3 + Cs^2 + D=0$ (I dont remember the values of A,B,C,D) is given, Asked to find out whether the system is_____
(A) Stable (B) Unstable (C) Marginally Stable
- 19) For implementing D flipflop using RS flip flop, the extra component needed is_____
(A) AND gate (B) OR gate (C) NOT gate (D) NOR gate
- 20) The output of an 8 bit DAC is 1Volt when the input is 00110010, then the full scale output of the same DAC will be_____

ans: 5.1 V (Hint: $1/50 \times 255$)

21) Fastest ADC is____

(A) SAR (B) sigma- delta (C) flash (D)...

22) The operating point of Class-B amplifier will be at_____

(A) exactly at cut-off region (B) inside saturation region (C) inside cut-off region (D) middle of active region

23) For an N bit ADC , the number of comparators needed_____

(A) N (B) $2N$ (C) $2N - 1$ (D) $2N-1$

24) De-emphasis circuit is used for_____

ans: Attenuating high frequency components

25) The laplace transform of e^{-2t} _____

Ans: $1/(s+2)$

26) The magnitude of $1 + \cos x + j \sin x$ _____

Ans: $2 \cos (x/2)$

27) A circuit is given in which the capacitor (1 μ F) is initially charged to 12V, At $t = 0$, one switch is closed so that another capacitor of capacity 1.5 μ F comes in parallel with the first capacitor, then in steady state what will be the voltage across them? (Visualize the circuit, as I can not draw the circuit since the editor is not supporting it)

28) Alpha of a transistor=0.99, $I_{co}=1\mu A$, $I_e=1 \text{ mA}$, $I_c=?$

29) If the input given to an inductor is $\delta(t)$ (ie: =1 when $t=0$ and ,=0 otherwise) then the current will be____

(A) infinity (B) -infinity (C) 1 (D) 0

30) For implementing Band pass filter using High pass filter(Cutt off freq= F_h) and Low pass filter (cutt off freq= F_l)_____

(A) $F_h=F_l$ (B) $F_h>F_l$ (C) $F_h<F_l$ (D)..

Ans: $F_h<F_l$

31) In the Enhancement type MOSFET the gate to source voltage V_s drain current characteristics will be_____

Ans: Drain current Increases as V_{gs} increases in active region

32) In a johnson counter, How many state have to be changed to increment the count from 0100 to 0111?

33) Odd parity generator is_____

Ans: XNOR gate

34) A circuit using op-amp was given, the question was to calculate output offset voltage____

Ans: $V_o(\text{off})=V_{in}(\text{off}) \times (1+R_f/R_1)$

35) Antialiasing filter is_____

(A) Digital filter (B) Analog filter (C) Can be Analog or digital (D) RC filter