**section A 30m (Compulsary)  
  section B or C 20 m(changed )m  
  Attempt either B or C sec B contains CST C E&C  
  Better to attempt Electronics paper (Those who are having electronics background)**

**Section A**

1. **Which of the folowing is not correct  
      a. (x+y)'=x'.y' b. (x'+y')'=x.y  
      c. (x'.y')'=x+y d. (x'+y')'=x'.y' [d]**
2. **Question on logic ckt. U have to find the output    ans. AB'+CD'+EF'**
3. **Output of MUX   
          \_\_\_\_\_\_\_\_\_  
         c-----| |  
         c'----| |-------Y  
         c'----| | ans. A xor B xor C  
         c-----| |---------  
                  | |  
   A B (select lines)**
4. **If X and Y are two sets. |X| and |Y| are corresponding coordinates and exact no.of functions from X to Y is    
     97 then  
      a. |X|=97 |Y|=1 b. |X|=1 |Y|=97                                                                        
      c. |X|=97 |Y|=97 d. .....**
5. **If two dies are thrown simultaneously what is the prob. of one of the dice getting face 6 ?  
      a. 11/36 b. 1/3 c. 12/35 d. 1/36 [a]**
6. **The relation ,<,on reals is  a. a partial order because of symmetric and reflexive  
       b. ... antisymmetric and ....  
       c. not ...... .. asymmetric and non reflexive  
       d. ... .... not anti-symm and non reflexive**
7. **In C language the parameters are passsed by     a. values b. name c.referrence d....**
8. **Advantage of SRAM over DRAM   ans. faster**
9. **Diasy chaining related question (refer Z80)  
      a. uniform interrupt priority  
      b.non .... ....  
      c.interfacing slower peripherals  
      d.....**
10. **RAM chips arranged in 4X6 array and of 8kX4bit capacity each. How many address lines reqd. to access  
      each byte  
      a. 12 b. 16 c.15 d. 17**
11. **Question related to AVL trees regarding how many no.of  nodes to be changed to become balanced after  
      addition of a leaf node to a particular node.  ans . 3**
12. **When following sequence is insertedin the binary search tree no.of nodes in left and right subtrees 52 86 64 20  
       3 25 14 9 85**
13. **Method used for Disk searching..    a.l  inked list b.  AVL c.  B-tree d.   binary tree**
14. **Which of the following is correct statement.  
       a.   1's complement can have two zero re[resentations                                   
       b.   2's ... ... represent an extra neg. number  
       c.   2's & 1's have no difference in representing 16-bit no.  
       d.......**
15. **AX=B where A is mXn ,b&X are column matrices of order m a. if m<n, X has infinite solutions  
      b.if m=n, rank of A <n then X has trivial solutions  c.... d....**
16. **The option avialable in C++, not C:  
       a.  dynamic scoping  
       b.  declaration in the middle of code block  
       c.   seperate compiled and linked units  
      d. ....**
17. **int a[4]={1,2,3,4};  
      int \*ptr;  
      ptr=a;  
     \*(a+3)=\*(++ptr)+(\*ptr++);  
    A part of code is shown. The elements in A after the execution of this code.  
      a.1 2 3 4 b. 1 2 3 6  
    c. compilation error d.1 2 2 4 [a]**
18. **Critical section program segment is   
        a.   enclosed by semaphores with P & V operations  
        b.   deadlock avoidance  
        c.    where shared resources are accessed  
       d. ...**
19. **when head is moving back and forth, the disk scheduling  algorithm is \_\_\_\_\_  
      a) scan   b) sstf   c) fcfs   d)....**
20. **how many times the loop will execute  
       LOOP LXI B,1526H  
       DCX B  
       JNZ LOOP   
       a)   1526H times    b)    31    c)  21   d)  38**
21. **the addressing mode in which the address of the operand is expressed explicitly within the instruction   
    a)   index addressing b)   absolute c)   indirect d)   immediate**
22. **(A - B) U (B - A) U (A ^ C) = ?  where A,B are two sets A' , B' are compliments of A and B  
      a) A U B   b) A ^ B   c)....   d)....**
23. **The network that does not use virtual circuit   
      a) IP   b) X.25   c)....   d)..**
24. **source routing bridge   
      a)  source will route the frame   
      b)  frame will routed with info in header  
      c).... d)..**
25. **cache access time 100 msec. main memory access time 800 msec if the hit ratio is 95% , what is mean access  
      time ...**
26. **The module that should be always reside in main memory is  
      a)  loader b)  link module   c)...   d)....  
       .... and some questions related to  
    1.   addressing mode 2.assembler passes 3.linking and loading  
    4. file directory search 5. turning machine   
    6. finite state machine 7. daisy wheel**
27. **The order of algorithm to merge the two sorted lists of  lengths m and n is   
    a. O(m) b. O(n) c. O(m+n) d. O(log(m)+log(n))**
28. **A chocolate block is of 4 X 4 size.How many cuts are needed to make 1 X 1 size blocks. No simultaneous  
      vert. & horz. cuts.**
29. **Which among the following is not correct  
    a. O(n) > O(log n) .. likewise**

**Section C**

1. **One question of Set Theory Like there Are two sets A and B and (A-B)union(B-A)union(A intersection B)   
    is equivalent to Ans. A union B**
2. **Union and intersection are in there sign conventions.**
3. **One question of probability Like between 100 and 999 how many no have the prob that they does not contain 7  
    Ans. 16/25 (not sure u can check by own)**
4. **Of Newton Rapson method...**
5. **Of power set A set contains {(fi),a,{a,b}} what is the powerset of it   Ans. 8**
6. **A question of logic gates Ans. U can got the answer very easily**
7. **A question on the Booths algo  Ans. The sequence is 1010101010101010**
8. **Relative addressing mode is used for Ans. Dont know.**
9. **For how many numbers there is no difference between little endian and big endian   
   Ans. 256**
10. **For the multiplication of two 8 bit numbers how much ROM will be used   
    Ans. 64k\*16 ROM(Check it)**
11. **Why direct mapping is not good for the mapping of Cache Memory.   
    Ans. Dont know**
12. **What is the main property of Desiy I/O Sytem Ans.**
13. **A question on the nyquist theorem   
    Ans. 18000 bps**
14. **What is the shannon theorem...   
    Ans. Refer to data communication(Stalling) book**
15. **CSMA/CD protocol is used in   
    Ans. Ethernet**
16. **What is the limitation of the Pulse Code Modulation   
    Ans. Refer to data communication book**
17. **In CSMA/CD   
    Ans. The Access to the channnel is probabilistic.**
18. **For an IP Router how many IP addresses   
    Ans. Check it i think Answer is Only One.**
19. **Which protocol u used when you want to know the IP address corresponding to a MAC Address   
    Ans. RARP**
20. **Which part of the IP header is used for the time limit of the packet.   
    Ans. TTL**
21. **Which PageReplacement algo will give the best result   
    Ans. By replacing that page which has the next reference after a long time.(optimal algo)**
22. **What the code will be said when it is called by another part and  it is not completed yet   
    Ans. Reentrant Code.**
23. **three questions on the simple programs**
24. **There is a sequence of no and prepare a binary tree and tell how many nodes are in the left and right sub tree.   
          Ans. Check it Ans (4,7)**
25. **hat is the rank of the graph   
    Ans. e-n+k**
26. **One question on the multithreading**
27. **Which traversal of the tree gives the node in the ascending  order.   
    Ans. Inorder**
28. **Which traversal of the tree gives the node in the ascending  order.   
    Ans. Inorder**
29. **What is garbage collector.**

**Aptitude Questions**

1. **Age problem**
2. **Time and distance**
3. **Coin**
4. **direction problem**
5. **(2n + 2 n-1/2 n+1 – 2n) what is gives if n = something**
6. **( 10n –1) n>1 when is divisible by 11.no divisible by 8**
7. **find the missing no. when it is divisible by some no**
8. **Boat problem**
9. **Average**

**Technical Questions**

1. **Which one is called family tree**
2. **virtual function and overloading**
3. **DHCP protocol**
4. **order of insertion and Heap sort**
5. **left recursion**
6. **find output: for(l=1;a<=l;a++)  
   cout<<++a; cout <<a;< p=""> </a;<>**
7. **DEBUG trigger (oracle)**
8. **In unrestricted session which system privilege mode is used (oracle)**
9. **NEXTVAL and CURRENTVAL in sequence (Oracle)**
10. **Unix system call ……like Var( )**
11. **OS 384 support which memory management**
12. **    Complexity to access name from the given double link list**
13. **Which WAN network is suitable for the 100Km or m. distance network**
14. **If duplicate segments , file are there in hardisk which is best for management  
    a) FAT  
    b) SAT**
15. **stop n wait protocol is associated with which layer**
16. **find errors from the c and c++ codes.**
17. **3 qns on operating systems. I qn on dijkestra algorithm**
18. **Using which pin it's possible to address 16 bit addresses even though there re only 8 address bits in 8085? Ans: ALE**
19. **Voltage gain for an amplifier is 100 while it is operating at 10 volts. What is the O/P voltage wen i/p is 1 volt**
20. **Quality factor indicates a) Quality of inductor b) quality of capacitor c) both**
21. **Qns related to bridges, routers and generators, which OSI layer they corresspond to. (Refer to stevens 4th chapter)**
22. **OPAmp's I/P ciurrent, O/p current and CMRR is given, what is the voltage gain**
23. **2-3 qns on scope of static variables in C. Qn to view o/p odf a C static var**
24. **Qn to print a value of a pointer**
25. **OPAmp's I/P ciurrent, O/p current and CMRR is given, what is the voltage gain**
26. **A qn to find the physical address from a given virtual address, virtual to physical address table was provided**
27. **6 bit mantissa and 8 bit exponent can present what maximum value?**
28. **4 bit window size in sliding window protocol, how many acknowledements can be held?**
29. **Security functionality is provided by which layer of OSI**
30. **Frequency spectrums for AM, FM and PM (figure given, u'veto tell which Kind of modulation it belongs to)**
31. **Among AM and FM which is better and why?**
32. **LASt stage of TTL NAND gate is called: Ans: Totem Pole Amplifie**
33. **SR to JK flip flop conversion. Ans: S=JQ', R=KQ**
34. **LSB of a shift register is connected to its MSB, what is formed: Ans: RING Counter**
35. **2-3 Qns based on Demorgan's laws (identiies: (A+b)' = A'b', etc)**
36. **2 qns on Logic gates (O/p of logic gates)**
37. **Diff in IRET and RET statements of 8086**
38. **How many address bytes are required to address an array of memory chips (4 \* 6), each chip having 4 memory bits and 8k registers.**
39. **Diff. in memory mapped and I/P O/P mapped Input/Output (Refer a book on Microprocessor)**
40. **Qn on pipeline architecture**
41. **QN on LAPB protocol**