Flextronics Technical Paper 1

Section C

```
an lead compensator zero is at Z=Zc, pole is at P=Pc then the following is correct
1.
 a. Pc > Zc, pc < 0, zc < 0
 b.
 c.
             gain margin of g(s)h(s)=1/s(s+k);
2.
 a. sqrt(1+k2)
 b. 0
 c. infinity
 d. 1
3.
            machestor code does not improves
  a. clock recovery
 b. bandwidth efficiency
 c.
             possion distribution is used for
4.
 a. used in FSM
 b.
 c.used for queuing delay system of mutually identical events of arrival
 d. both a and c
             no.of filpflops for mod 11 counter
5.
   a. four
   b. five
   C.
6.
             no.of filpflops for mod 11 counter
 a. four
 b. five
```

c.

7. if even parity is used for parity generation, what is the hamming distance (simple fig is given) ans:2

8. the code set is {00000,00111,11100,11011} what is the error detecting and correcting ans:2,1

9. operational amp characteristics following is correct:

1. input impedance is 0

- 2. output impedance is infinity
- 3. input impedance is infinity
- 4. gain is infinity which combinations are correc
- 10. band pass signal having frequencies 2.5k and 4.5k?give the sampling freq
 - a. 9k
 - b. 4k
 - c. 4.5k
 - d. 7k
- 11. definition of avalanche diode multiplication
- 12. more no of ripples are present in the diagram?which is correct
- a. lower order filter
- b. high order filter

c.

13. If CPU have one interrupt pin and on to connect with external devices with some priority? which type of the following is used?

- a. parallel priority interrupt
- b. daisy chain
- c. RS filpflop
- d.

14. one megabit file transfer, serially on 9600 baud one start bit and two stop bits, then how much time it takes (approx)

- a. 4 hours
- b. 2 hours
- c. 20 minutes
- d. 2 minute

15. IEEE 802.5 is ans: TOKEN RING

- 16. Code sequence is given what is the error correcting distance
- 17. bit stuffing used in HDLC Protocol for ans: b is correct(read on text book)

Section A AND B (Both are mixed)

18 If "AaBbCc" is passed to the char char x(*a) { a[0]?x(a+1):1; printf("%c",a[0]); return 1; } what will be the output?

19 f(*p)

```
{
    p=(char *)malloc(6);
    p="hello";
    return;
    }
    main()
    {
        char *p="bye";
        f(p);
        printf("%s",p);
    }
    what is the o/p? ans:bye
```

20 hen the program counter is incremented in the instruction cycle

- a. fetch cycle
- b. int cycle
- c. execuation cycle

d.

21 wo sorted lists of n elements will take at least fine the order of complexity?

- a. 2n
- b. n/2
- c. square(n)
- 22 logic diagram is given? find the expression ans: OR gate
- 23 uestion on JAVA string ans: string ends without a null character

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ans :200ns

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26 about deadlock condition

27 convert 41.6875 into binary

- 28 read about IP AND IPX
- 29 read about NFS

30 DHCP is

- a. for routing
- b. for network address conversion
- c. for diagnosis
- d.

- 31 xecution phase can be
- a. pipelined
- b. no parallelism is possible
- c. vector processing
- d.

32 In public key algorithm, A wants to send message to B which key is used

- a. A public key
- b. A private key
- c. B public key
- d. B private key
- 33 to prevent replay attacks in transmission
 - a. symmetric encoding
 - b. Asymmetric encoding
 - c. for every exchange, key should be changed
- 34 irtual functionality is used in C++
 - a. dynamic binding
 - b. if the derived func is present but base class not present
 - c.
- if there are n nodes in a binary tree, how many null pointers are there ans:n+1;
- 36 if heap sort contains n elements, no of comparsions required are
 - a. log(n)
 - b. height of heap sort
 - c.
 - d.
- 37 question on ICV(integrity check)
- 38 which of the following is efficient in terms of space
 - a. insertion sort
 - b. quick sort
 - c. selection
 - d. both a and c
- 39 in 32 bit representation, the range of numbers in 2's complement form ans :-2 to the power of 31 to 2 to the power of 31 minus 1
- 40 about normalization
- 41 socket is implemented in TCP Layer. which of the following is related to TCP layer ans: port number
- 42 in reentrant procedure, which should be not used for passing parameters? a. passed by reg

b. by direc c. by indir d. by stacl	rect
43 a. congest b. c. d.	flow control is used for ion at receiver
44 b. c. d.	flow control is used for a. congestion at receiver
45	5 questions on DBMS are there
	in global static variable, declartion in a file ration of scope tance of the value through out the file
47 a. hash tab b. binary s	
b. vicever c. to get a	in demand paging overhead of context switching is more due to ocesses from disk to memory sa ssociative table ng to the disk
49	when write through is better than write back(related to cache memory)
50	which is false when normalization is used?can't express
51 II: validatio a. i and ii b. i and ii c. i true an d. i false a	are false nd ii false
52 a. bubble b. selectio c. quick s	on sort

by about subroutine, precondition is false. what about post condition

- a. post condition is not defined
- b. post condition is always true

c. d.

54 When static variables are used, which one of the following is not possible? a. dynamic run time

- b.
 c.
 55 in product of x and y, if(x=0|y=0) y=1; else y=0; (not cleared) what is cyclometric complexity?
 a. 3
 b. 2
- c. 1
- d. 0

56 CREATE TABLE NEW AS SELECT BIG FROM EMP The above SQL statement is correct or not? (question is not cleared)

57 path testing is

- a. white box
- b. black box
- c. installation test
- d. environment test

58 program is given? above algorithm represents what type of search?

- a. binary search
- b. interpolation search
- c. sequential search
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59 if x->y in a relation R, x1 and x2 are in x, y1 and y2 are in y (question not cleared), about functional dependancy

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a.x1=x2 and y1=y2
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b.

c.

60 in a down loading from website ,which one is correct? ans: check the byte code and indicate the error, if any.

- 61 about UDP one Address is given but that is not the state table what will it do the packet
- a. packet is discarded
- b. packet is sent to ethernet server
- c. packet is sent to other address

d.

62 in associated memory for fast accessing which one is used

- a. single linked list
- b. double "
- c. hash table
- 63 hich 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]

64 Question on logic ckt. U have to find the output ans. AB'+CD'+EF'

```
65 Output of MUX
```

A B (select lines)

66 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. $|X|=97 |Y|=97 d. \dots$
- 67 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]
- 68 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
- 69 In C language the parameters are passed by a. values b. name c.referrence d....
- 70 Advantage of SRAM over DRAM ans. faster

71 Diasy chaining related question (refer Z80) a. uniform interrupt priority b.non c.interfacing slower peripherals d.....

72 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

73 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

74 When following sequence is inserted in the binary search tree no.of nodes in left and right subtrees 52 86 64 20

3 25 14 9 85

75 Method used for Disk searching.. a.l inked list b. AVL c. B-tree d. binary tree

76 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.....

77 AX=B where A is mXn ,b&X are column matrices of order m a. if m b.if m=n, rank of A < c.... solutions trivial then>

78 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.

79 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]

- 80 Critical section program segment is
 - a. enclosed by semaphores with P & V operations
 - b. deadlock avoidance
 - c. where shared resources are accessed
 - d. ...

81 when head is moving back and forth, the disk scheduling algorithm is ______a) scan b) sstf c) fcfs d)....

82 how many times the loop will execute LOOP LXI B,1526H
DCX B
JNZ LOOP
a) 1526H times b) 31 c) 21 d) 38

83 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

84 (A - B) U (B - A) U (A \wedge C) = ? where A,B are two sets A', B' are compliments of A and B

a) A U B b) A ^ B c).... d)....

The network that does not use virtual circuit a) IP b) X.25 c).... d)..

86 source routing bridge

- a) source will route the frame
- b) frame will routed with info in header
- c).... d)..

87 cache access time 100 msec. main memory access time 800 msec if the hit ratio is 95%, what is mean access

time ...

88 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

89 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. $O(\log(m)+\log(n))$

90 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.

91 Which among the following is not correct a. $O(n) > O(\log n)$.. likewise

Section C

92 ne 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

93 Union and intersection are in there sign conventions.

94 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)

95 Of Newton Rapson method...

96 Of power set A set contains $\{(fi),a,\{a,b\}\}$ what is the powerset of it Ans. 8

97 A question of logic gates Ans. U can got the answer very easily

A question on the Booths algo Ans. The sequence is 101010101010101010

99 Relative addressing mode is used for Ans. Dont know.

100 For how many numbers there is no difference between little endian and big endian Ans. 256

101 For the multiplication of two 8 bit numbers how much ROM will be used Ans. 64k*16 ROM(Check it)

102 Why direct mapping is not good for the mapping of Cache Memory. Ans. Dont know

103 What is the main property of Desiy I/O Sytem Ans.

104 A question on the nyquist theorem Ans. 18000 bps

105 What is the shannon theorem... Ans. Refer to data communication(Stalling) book

106 CSMA/CD protocol is used in Ans. Ethernet

107 What is the limitation of the Pulse Code Modulation Ans. Refer to data communication book

108 In CSMA/CD Ans. The Access to the channel is probabilistic.

109 For an IP Router how many IP addresses Ans. Check it i think Answer is Only One.

110 Which protocol u used when you want to know the IP address corresponding to a MAC Address Ans. RARP 111 Which part of the IP header is used for the time limit of the packet. Ans. TTL

112 Which PageReplacement algo will give the best result

Ans. By replacing that page which has the next reference after a long time.(optimal algo)

113 What the code will be said when it is called by another part and it is not completed yet Ans. Reentrant Code.

114 three questions on the simple programs

115 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)

116 hat is the rank of the graph Ans. e-n+k

117 One question on the multithreading

118 Which traversal of the tree gives the node in the ascending order. Ans. Inorder

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120 What is garbage collector.

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about normalization

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- d. by stack

163 flow control is used for

- a. congestion at receiver
- b.
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- 164 flow control is used for a. congestion at receiver
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165 5 questions on DBMS are there

- 166 in global static variable , declartion in a file
- a. localization of scope
- b. persistance of the value through out the file
- c.
- d.
- 167 in sorted table contains elements , which of the searching is false a. hash table
- b. binary searching

168 in demand paging overhead of context switching is more due to

- a. copy processes from disk to memory
- b. viceversa
- c. to get associative table
- d. swapping to the disk

169 when write through is better than write back(related to cache memory)

170 which is false when normalization is used?can't express

171 I :verification: are we doing right product

II: validation: are we doing product right

- a. i and ii are true
- b. i and ii are false
- c. i true and ii false
- d. i false and ii true

172 A table contains less than 10 elements which one is fastest

- a. bubble sort
- b. selection sort
- c. quick sort

about subroutine, precondition is false. what about post condition

- a. post condition is not defined
- b. post condition is always true
- c.
- d.
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d.

183 nice('val')? unix command

```
184 for(l=1;a<=l;a++)
cout<<++a;cout<
output?
a.21
b.22
c.23
d.none
185nt a[4]={1,2,3,4};
array to the pointer?
a.int *a[4]
```

b.int (*a)[4]

186valid system prievlage in restricted seesion?

- a. create user
- b. create session
- c. restricted session

```
187emaphore?
```

```
a. shared memory
b.....
```

188Semaphore?

```
a. shared memory
b.....
```

189which is used to store hard disk sector info

- a. eerom
- b. rom
- c. ram
- d. cmos

190If duplicate segments, file are there in hardisk which is best for management

- a. fat
- b. san
- c. raid(may be)
- d.....

1911f a lan with 100mbps is there which wan can give same features?

- a. atm
- b. isdn
- c. x.25
- d.

192 IPv6 has how many bytes for its address?

- a. 8
- b. 12
- c. 16

193Sliding window in which layer?

- a. session layer
- b. transport layer
- c. application layer
- d. presentation layer

194when interupt occurs to cpu what happen?

195DEBUG trigger (oracle)

1960rder of insertion sort and Heap sort?

a. $O(n^{**2}), O(n \log n)$

b.....

197NEXTVAL and CURRENTVAL in sequence (Oracle)?

198Which one is called family tree?

- a. B+
- b. Binary
- c. AVL

199Intel 386 support which memory management?

- a. paged
- b. segmented
- c. paged segmented
- d.....

200Complexity to access name from the given double link list?

- |A|-->|B| | |<--| | a. O(n)
- b. O(n**2)
- c. O(nlogn)

201 question on virtual function and overloading?

202 question to find error in this C++ code.