## Flextronics Sample Paper 1

```
1 .
f(char *p)
{
p[0]? f(++p):1;
printf("%c",*p);
}
ans:dcbaA (Just reversing the string
2
f(char *p)
{
p=(char *)malloc(sizeof(6));
strcpy(p,"HELLO");
}
main()
{
char *p="BYE";
f(p)
printf("%s",p);
}
what is the o/p???
ans:HELLO
```

if call that fuction with f (Aabcd) what is the output??

3 To sorting array of 10 elements which sorting is best
a)slection
b)bubble
c) tree sort
d)....
ans:
4 To saving space paoint of view which sort is best
a)selection
b)insertion
c) both a \& b
d)... check it once.U Can easy Aanswer this question(UCA)

5 Which statement is wrong on heap
a)Any two childs should not same
b)..
c)..
d)...
ans:
6 one more question on heap

7 read about cyclometric complexity..
8 how many null pointer are there in N number binary tree ans: $\mathrm{N}+1$

9 Two sorted list of size $n$ what are the maximum comparison in merge ANs:2n-1

10 converting 41.685 to binary
11 pc is incremented while executing ---------- instruction ans:fetch instruction

12 this is gates (NAND)problem
It means some gate figure has given with all NAND gate we have write equavalent gate
ans:OR gate
13 x :validating :Are we producing product right
$y:$ verification:Are we producing right right
a) $X$ is wrong statement
b) $y$ is "
c) $x$ and $Y^{\prime \prime}$
d) $x \& y$ is right statement

14 NFS some queston in NSF.
see distibuted operation System book by tenaun bamab
15. IP \& IPX is implemented in trasport layer.All our friends can answer this question .Here i am unable to recall that question.

16 comparison between hashtable and binary tree ans:

17 client server is working in asyn mode then how communication will take place bt client and server.
18 once context swithing occures then ------------will take place
a)saving register b)saving stack c).. d)..

19 If precondition is failed what u say about postcondition?
Note:Read about preconditon and postcondition
20 whiling download java applete then web broswer do the folling
a)checking the class structure.. b)..c).. d)..

Read about this
21 Strings in Java
a)Mutable b)variable length string c).. d)..
ans:b

22 in Internet Transprot layer which is not a protocol
a)/etc/host b)TCP c)UDP d)..

23 Which is not specified in CODD's rules
It is from DBMS question
Refer NAVATHI BOOK chapter -9 appendx topic is CODDE's rules
24 what is the use of Normalization
25 Functional dependecy $x->y$ is shows that
a)if $x 1=x 2$ then $y 1=y 2$ b).. c).. d).. ans:a

26 one question on IP addsress 243.65 .77 .8 some thing
27 If $A$ sends a message to $B$ with encryption then key is
a)A public key b)B public key c)A private key d)B private key ans:b

28 In a class only declaration of the function is there but defintion is not there then what is that function
ans:virtual function
29 what is not necessary condition in dead lock ans:

30 One question from multible inheritance...
31) ICV protocal
32) one question from catches like write-through protocal etc
33)catche access time is 100 ns ,memory access time is 1000 ns and hit ratio is 0.9 then what is average memery access time
a) 100 ns b) 200 ns c$) 400 \mathrm{~ns} \mathrm{~d}) 500 \mathrm{~ns}$ ans:b
$* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ~$

## SECTION C:

1.an lead compensator zero is at $\mathrm{Z}=\mathrm{Zc}$, pole is at $\mathrm{P}=\mathrm{Pc}$ then the following is correct a.Pc $>\mathrm{Zc}, \mathrm{pc}<0$, zcy in a relation $\mathrm{R}, \mathrm{x} 1$ and x 2 are in $\mathrm{x}, \mathrm{y} 1$ and y 2 are in y (question not cleared), about functional dependancy
a. $x 1=x 2$ and $y l=y 2$
b.
c.
43. in a down loading from website, which one is correct?
ans: check the byte code and indicate the error, if any.
44. 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
45. in associated memory for fast accessing
which one is used
a. single linked list
b. double "
c. hash table
*******************Hughes paper in DCE ${ }^{* * * * * * * * * * * * ~}$
All ques. had four options.
1- What is max. no. of hops in hypercube $\mathrm{n} / \mathrm{w}$ with $\mathrm{n}\left(=2^{\wedge} \mathrm{p}\right)$ to go from one node to another ?
a. p
b. $\log p$
c. $\mathrm{n}^{\wedge} 2$

2- What is Kerberos?
ans. Authentication Protocol
3-In completely connected multiprocessor system with $n$ processors, links will be of the order of
a. $\mathrm{O}\left(\mathrm{n}^{\wedge} 2\right)$
b. $\mathrm{O}\left(2^{\wedge} \mathrm{n}\right)$
c. $\mathrm{O}(\mathrm{n} / 2)$

4-When quick sort gives worst performance ?
ans. When elements are in order.

5- o/p of each sorting step of 8 elements was given and had to recognise which sorting algo.?
Ans. Bubble sort (Not Sure, Check it out )
6-In worst case , which sort is best out of following sorts?
a.heap
b.selection
c.quick (ans.)
d. insertion

7-Three very simple gate circuits each having inputs A,B,C,D were given and had to tell ,which two give same result ? (DeMorgan's Law was used in solving )
Ans was (a) \& (c) (o/p of a \& c was coming to be AB $+C D$ )
8-K-map given, had to tell simplified function
Ans was perhaps $A B+A D+A C+B C D$
K-Map was
CD`
AB 0000

0010
1111
0111
9-What is Function Point?
Ans. S/W estimation technique
$10-\mathrm{p}$ points to an integer. We don't want p to change value. In C , what declarations will we use?
A const int *p
b.int *p
c.int const *p
e. int* const p (perhaps ans.)

11-Diff between 2NF \& 3NF ?
Ans. D (last option)
12. Which does not use client server model ?
a. Email
b. Web access
c. C. Telephone call
d. N/w file system

13 -In a pipeline having 3 stages, each having reliability of 0.9
,what is overall reliability of pipeline?
a. 0.9
b. 0.729
c. 0.81
$14-2$ level cacheis there first level cache's access time is 100 ns ,second level cache's access time is 33 ns \& memory access time is 1000 ns . What is total memory access time ?
ans. 140 ns
15-In public key cryptography,Awillsend message to B
ans. Using B's public key
16-What does projection of a relation give?
Ans.gives vertical partition of relation corresponding to specified columns.
17-For disk or direct access storage, which is best?
a. AVL
b. B-tree
c. Red tape ..

18-There is a tree with inorder threading Node B is inserted as left child of nade A. Node A already has right child. Where will the null ptr of B point?
ans. Parent of A (perhaps)
19-There is a diskless workstation. Which will be the first protocol it will use?
a FTP
b. ARP
c. HTTP
d. RARP

20-Compiler keeps which of following ?
ans. Symbol table
21- 'ping' command uses which protocol?
ans. ICMP
22-Merge sort uses which technique?
Ans. Divide and Conquer
23-Program counter is incremented in
a. fetch (ans)
b. decode
c. execute

24-what does the following program do ?
f(int n)
\{
int c;
while(n)
\{
$\mathrm{n} \&=\mathrm{n}-1$;
c++;
\}
print c;
\}
ans. Program prints the no. of set bits in no.
25-What is this called (char *) $(*(*(* \mathrm{~A}[\mathrm{X}])()))()$
ans. Array of X pointers to a function returning pointer to functions that are returning pointer to char (not sure )

26- For synchronisation in distributed computing, what should not be there?
a. all machines are synchronised by a global clock
b. all systems should have their own clock (perhaps ans)

27-Java applet of a moving /waving file is running on one machine then it means
a.Java's executable code is downloaded and running on the $\mathrm{m} / \mathrm{c}$
b.A virtual X server is running on that $\mathrm{m} / \mathrm{c}$ while the actual program is running on the web server.

28-What is in RSA algo. ?
a. First the session key is encrypted \& then whole message is encrypted using RSA Algo.
b. Message is encrypted using RsA algo.
c. First Rsa algo is used \&then encrypted with the session key.

29-What is dirty read?
a. Transaction reexecutes and gives diff. Results from the original execution
b. Read is done when the transaction is not yet committed

30-What is coupling ?
a. It tells the strength of interconnection between two program units.

31-Any $\mathrm{n} / \mathrm{w}$ on the computer can have only
a. one domain \&one IP
b. more than one domain \& more than one Ip
c. one domain and more than one IP
d. more than one domain \& one IP

32-Which one does not have file descriptor?
a. process
b. keyboard
c. pipe
d. socket

33-What does CONNECT BY means
a.connect to a different databaser for retreival
b. arrange in tree ordered structure

34-In two phase commit protocol, why log is used during transmission \&reception ?
a. To retrieve the status in case of crash

35-In which algo. Waiting time is minimun?
Ans, SJF
36-How many address bits are there in Ipv6
ans. 128 bits

37-During run time heap is managed by
a. a user process in kernel mode
b. A system process manages heap for all the processes
c. A system process for each process
d. A user process in user mode

38-In which of following search is efficient?
a. height balanced tree
b. Weight balanced tree
c. Binary tree
39.A ques. on resource relocation, sharing (I don't remember more than this regarding this ques.)

40 -some ques. options were sth like
a. transparency control
b. Migration control
c. Concurrency control

41-X:In DFD, input is converted into output by passing through various functional units Y:DFD cannot be used in object oriented design
a. both X\& y are correct
b. both $\mathrm{X} \& \mathrm{Y}$ are incorrect
c. X correct, Y incorrect
d. Xincorrect, Y correct

42-Where regression testing is used ?
a. Dynamic analysers
b. Loaders

43-For Java interfaces, what is true?
a. Functions declarations are not given'
b. Variables are not declared
c. Instance variables are not used

44-In a linked list, we can delete a node in order of
a. 1
b. n
c. $\mathrm{n}^{\wedge} 2$

45-If there are N people and we have to do symmetric \& asymmetric cryptography, how many keys would
be used in these cases respectively?
a. $\mathrm{N} \& \mathrm{~N}^{\wedge} 2$ (probably ans)
b. $\mathrm{N}^{\wedge} 2 \& \mathrm{~N}$
c. $\mathrm{N} \& \mathrm{~N}$
d. $\mathrm{N}^{\wedge} 2 \& \mathrm{~N}^{\wedge} 2$

46-The protected element of a class can't be accessed by
a. member functions of the same class
b. member functions of the derived class
c. member functions of any other class in the same program (Ans.)

47-NFS uses same file structure as unix
48-To solve an expression which of following trees will you use ?
a. postfix
b. infix

Here are some questions of Hughes software system computer part:-

```
Q. }1\mathrm{ void x(char* a)
{
(a[0])?x(a+1):1;
printf("%c",*(a+0));
return 1;
..;
```

Input string 'a' is assigned as AaBbCc , what is the output?
Ans.-cCbBaA
Q2 a question on digital gates ANS is OR gate.
Q3 what is the binary representation of 41.6785
Q4 if the precondition for a subroutine does not hold then
1.postcondition does not hold
2.postcondition may or may not hold
3.?
4.?

Q5. In java

1. java strings are mutable. And some other options on java strings
```
Q6. Void f(char *p)
{
p = (char*)malloc(6);
strcpy(p,"hello");
}
void main( )
{
char *p = "BYE";
f(p);
printf("%s",p);
}
ANS BYE
```

Q7. A question on write through and write back algo.
Q8. What is concerned with transport layer.
Ans PORT.
Q9. A server can work with ip and ipx protocol.how the server will determine to which protocol the incoming packet coresponds .

Q10. For which purpose dhcp is used ANS ip address
Q11 global vaariable defined as ststic will serve the purpose of ---
Q12 Question on NFS ANS It uses the same semantics as unix for file system
Q13. Program counter is incremented typically in which uses ANS fetch
Q14 NO of NULL pointers in a tree with n leaf nodes ANS $\mathrm{N}+1$
Q15.thread take less time than process context Why? Ans. Address space is
same.
Q. 16 Which algo is best for sorting 10 elements?

Ans. $1>$ binary tree $2>$ selection $3>$ bubble $4>$ none
Q. 17 a question on ICV(networking)
a) When A sends an ICV and message, B computes ICV , checks It with given ICV, and decodes Message
b) Similar other
Q. 18 When server A sends a time request to server B, (time synchronization), and response becomes past, What does A do?
a) resets its own clock
b) resends time request again
Q. 19 in public key encryption what does A do such that It is not visible to others?
a) A uses public key part of A
b) A uses private key part of A
c) A uses public key part of B
d) A uses private key part of B
Q. 20 function dependency can be described as:
Q. 21 q. on findind cyclometric complexity of the given program
$1>72>53>44>0$
Q. 22 Codd's rule related to database
Q. 23 path testing comes under
A) white box
B) black box
Q. 24 when an ip address is not in the computer adresss resolution file what does It do with that packet a)Ignores It
c) sends It to default gateway
d) sends It to ethernet server
Q. 25 execution divided in different stages then this is called ANS. Pipelining
Q. 26 in C the macros are

ANS. converted in to inline code during preprocessing
Q. 27 X: verification means doing the right things Y : validation means doing things right
a) both true
b) both false
c) one true one correct
Q. 28 void insert (key, r)

Keytype key, data
\{
if ( $\mathrm{n}>=\mathrm{max}$ )
ERROR
Else
$\mathrm{R}[\mathrm{n}++] . \mathrm{key}=\mathrm{k}$;
Which is best?
$1>$ sequential search
Q. 29 which is best for associative list searching?

1) single linked list
2) doubly linked list
3) hash table
Q. 30 A question based on SQL ?
Q. 31 which is not necessary condition for deadlock?
$1>$ mutual exclusion
$2>$ no preemption
$3>$ is ANS.
$4>$ Circular wait

## From Venky..

1. a processor has two level cache.Their access time (level1 and level2) is 100 ns and 300 ns respect.Memeory access time is $1000 \mathrm{~ns} \$$
$=\Rightarrow$ ans is 140 (b)
$==>2$ 2.diskless server uses
$=\gg$ a rarp
$==>b$ arp
$==>\mathrm{c}$ ftp
$==>$ d.telnet
$==>$ ans rarp
$==>3$.which one of them is not a client server
$=>$ e-mail
$==>$ telephone
$==>$ webserver
$==>$ and one more
$==>$ ans is e-mail or telephone.
$=\Rightarrow 4$.Which one is used to represent operations
$=>$ infix
$==>$ postfix
$==>$ binarytree
$==>$ and one more
$==>$ ans binary tree
$==>5$.one qustion was on private key and public key.The quest. was
if a wants to send a message to $b$ that no one other that $b$ should $\$$
$==>$ A private key
$==>$ A public key
$=>$ B private key
$==>$ B public key
$==>6$.compliers maintain
$==>$ ans is symbol table
==>
From Diwakar..
1) what a java interface not have?
ans - instance variables
2) what is done with java code on a web-page
ans - downloaded and executed on ur pc
3 ) what is the order of deleting a node from a linked list given a ptr to it ans $\mathrm{O}(\mathrm{n})$ ( since u have to traverse the list to reach the prev. node)
3) what is RSA
4) how can A send a messageto B so that B knows its from $A$
ans A uses his private key so that B can use A's public key
5) what is the best sort in worst case
ans heap sort
6) what is the given sorting
ans selection (check it )
7) what can access protected memebers of a class
ans other classes of that program
8 ) what protocol is used by a machine to map an ip to hardware address
ans arp
8) what is the size of ipv6
ans 128 bits
9) what protocol has ping
ans icmp
10) how many keys are needed in symmetric and asymmetric crptography?
11) one on a right threaded tree
12) very easy $k$-map
ans ithink its b)
13) very easy ckt
ans choice which has option : a\&c are equivalent
14) what in unix doesnt have a fd
ans process ( this was the first ques ).

## Regarding Hughes

paper they conducted two tests. Both were technical(no aptitude test). First one was compulsory for everybody. In second one could opt for electronics or computers. In all i suppose there were 50 questions. And just before interview you were supposed to fill up a performa which they call Behavioural Test. This was to check you interpersonal skills and socialising capabilities. Questions like - would you like to be elected leaders of organising committees, do you like peoply express their agonies to you, do you wish people be close to you type questions were repeated in one and the other form.

Interview was technical as well as personal. CGPA did count - it seems. They selected 8 people from here. BTW what's your current CGPA and what's the strength of your class. Do they come for B.Tech and M.Tech separatel as the case here is or it's all at once.

Questions:
1.If a precondition of a sub routine fails then
a. post condition fails as well
b. Post condition may fail
c. post condition is declared but now defined.
2. whatz the o/p of the following program

```
char * a= "AabbCc";
void x(char *a)
{
a[0] == 0 ? x(a+1):1;
printf("%c",*a);
return 1;
}
x(a);
a. AaBbCc
b. cCbBaA
```

3. What is DHCP used for?
4. There are 2protocols IP and IPX are running on top of Ethernet. Suppose a packet addressed to that ethernt card arrives, to which protocol the ethernet sends the packet?
5. It checks the payload of the frame and finds out the protocol type and despatches it to the right protocol
6. It fins out the protocol type that is mentioned in the ethernet frame.
7. despatches to both the protocol
8. What is the use of global static variable in C ?
9. In which stage of the compilation the Macro in C are converted into Iline code? (this is not the exact Qn a slight variation of it)

7 In the IP/Ethernet network, a packet with destination address
192.32.65.70 arrives and there is no entry for this address in the routing table of the $\mathrm{m} / \mathrm{c}$ ? what does the $\mathrm{m} / \mathrm{c}$ do about the packe
a. discards the packet.
b. Brodacasts into the ethernet.
c. sends to default router
8. in Public key Encryption , if A wants to send a encrypted msg to B then A encrypts the message with
a. A's public key
2. A Pvt key
c. B's public key
d. B's Pvt key
9. consider the SQL statement "Create table New as select * from oldtable"
a. the sql stament is a correct one
b. New is reservd word there is an error
c. you can't select anything while creating a table
10. By Codd's defn for RDBMS whih one is not right?
options, I don't remeber
11. If $X$ and $Y$ are two attriubutes of a relation and 1 and 2 be any two tuples in that relation
Y is fuctionally dpndant on X iff ( $\mathrm{X}->\mathrm{Y}$ )
a. if $(x 1==x 2)$ then $y 1==y 2$
b. if $(x 1==y 1)$ then $\mathrm{x} 2==\mathrm{y} 2$
someother combinations
12.The normalization process
1.reduces the data redundancy
2.It reduces the inconsistency that arises due to the data redundancy
13. $((\mathrm{A}$ nand A$)$ nand $(\mathrm{B}$ Nand B$))=$ ?
a. $\mathrm{A}+\mathrm{B}$

The question was not exactly in this form. gates represented pictorilly
14. whtz the purpose of flow control?

1. to control errors
. to control congession the receiving end
2. to sequnce the out of sequence packets
3. Whic is false about Java strings
4. The are Null terminated
5. Set of Chars
6. The Condition checking $==$ and $=$ on a sme pair of strings gives different results.
7. When a java Applet is downloaded what does it do?

Don't remeber the options
it's went something like this:

1. checks the magic nubmer
2. Whatz is the Cyclometic complexity of the following code don't remember the code exactly

Some more questions..
1: a machine A wants to set it's time same as a a machine $B$ so it sends a packet to $B$ and $b$ sends
reply.but the time on packet is over by the timete packet reached A.A has to a1:set the time on packet
b2:increment its time slowly so as to reduce deifference
c:send packets repeatedly till it gets a packet with time less tan the current time
2.which of the following protocols does not find mac address given internet address a>arp
b.rarp
3.when an java applet get's downloaded what happens
a.the byte verifier checks the magic number
4.when A wants to send a mesg to B using Public key cryptography he uses a.A's public key
b.A's private key
c.B's public
d.B's private
5.how does a string in java differ from that of $\mathrm{c} / \mathrm{c}++$
a1.java strings are mutable
b.java strings does not have a $\backslash 0$
6.given str="AaBbCc"and a small c program something like a:b:( )
the program actually reverses the string recursively
7.some protocol SHDC
8.NFS server is similar to
a.provides similar sevices as unix
b.a file trans fer..
c.just gets the file for reading..
9.an address 202.15.46.45 is to be located.the machine does not have info about 202.0.0.0 or 202.15.0.0 0r 202.15.46.0
so the DNS server willl now
a.discard the packet
b.send the mesg to a default server if available
c.send mesg to a DNS server if available
d......
10.verification:"are u building the right product" validation:"are we building the product right"
a.both are wrong(ans)
b.both are correct
c.first wrong second correct
d.first correct second wrong
11.A:"cohesion is a desirable property"
$\mathrm{B}:$ "cohesion means the property that the entire unit is one.."
a.both are correct
b.both are wrong
c.first wrong second correct
d.first correct second wrong

12: definition of functional dependency.
13:which of the following does not use extra memory
a..
b.insertion sort
c.shell sort
d.both b and c .

14:which of the following is better for ten elements
a.bubble sort
b.selection sort
c.quick sort
d..
15.the memory reference time for cache is 100 ms and for memory is 1000 ms .the probalility of a hot is .9.the average memory access time is
a:100
b:200(ans)
c:500
d:1000
16.a question on socket numbers

17there is an ordered binary tree and an index structure a.we can use ordbintree without ordering b.orb are used with ordering where as indexing canbe done without ordering c.indexing uses extra memory
d..
18.there is ethernet protocol and ethernetIPstack in MAC sublayer when an address has to be found which is use

A question on multi threading!
It has got a PC, register space kind of options.
A question on NFS.
a. doesn't allow read.
b. it is just like Unix file system.
c. After the file is opened, the whole file os transferred to the client d. there is no state information maintained.

What takes maximum time in a context switch.
a. saving registers.
b. address space switching.
c. flushing the TLB
d. getting the new process inside the memory.
1.If a precondition of a sub routine fails then
a. post condition fails as well
b. Post condition may fail
c. post condition is declared but now defined.
2. whatz the $\mathrm{o} / \mathrm{p}$ of the following program char * $\mathrm{a}=$ "AabBCc";
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\{
$\mathrm{a}[0]==0$ ? $\mathrm{x}(\mathrm{a}+1): 1$;
printf("\%c",*(a+0));
return 1 ;
\}
$x(a)$;
a. AaBbCc
b. cCbBaA
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Don't remeber the options
it's went something like this:

1. checks the magic nubmer
2. Whatz is the Cyclometic complexity of the following code don't remember the code exactly

Thaz all I rember.
$1-\mathrm{N}$ keys to be sorted using n space, which algo?
a. insertion
b. shell
c. both insertion and shell (ans)
d. quick

2-Heap doesn't have following property?
a. smallest element is at leaf
b. two elements cannot be the same. (ans)
c. height of heap is logn
d.

3 -searching time is min. in
a. Hash

4-To sort 10 values, which sort will you use ?
a. bubble (ans)
b. quick
c. binary tree
d. All the above

5-A has to send message toB
ans. A will use B's public key
6-a ques on NAND gates (perhaps same as that in DCE)
a figure was given like
(A nand A ) nand (B nand B) ans- A or B

```
7- F(char *p)
{
p=(char*)malloc(6);
strcpy(p,"hello");
}
main()
{
char*p;
p="bye";
f(p)
printf("%s", p);
}
```

ans- bye
8-In Asynchronous transmission
a) client sends a request and then waits for response....
b. client send a request and then continues with work without expecting a response
c. client sends a request and the continue with work and reacts
for the response when it comes (ans)
d.

9-DHCP is
a. assigning IP addresses

10-Ethernet LAN has IP \&IPX protocol at the network layer, a packet comes from some other host.
a. it will not give packet to any layer
b. it will check the data field in the frame for the protocol type and send it accordingly
c. it will check the protocol field for the protocol type and send the frame accordingly (ans)

11-verification:Are we building the right product?
Validation:are we building the product right?
Ans. Both are wrong.
12- Normalisation
13-
char *p="AaBbCc"
int $x$ (char* ${ }^{*}$ )
\{
$\mathrm{p}[0]$ ? $\mathrm{x}(\mathrm{a}+1): 1$;
printf("\%c",*a);
return 1 ;
\}
ans cCbBaA
14-in line expansion of macros happens in preprocessing stage of compiler
15 -when is Write through is better from write back in terms of cache.
a. single cache less instructions (ans)
16. if the compiler gives static allocation for a program then which is not possible
a. Dynamic binding
b. Recursion (ans)
c. Indirect address loaction
d. Direct address location

17-which of the following will have minimum thread switching overhead;
a. INET domain sockets
b. UNIX domain sockets
c. shared memory variables (ans)
d.

18-what is the cyclometric complexity of the following code
$\operatorname{if}(x==0$ or $y==0)$

```
{
#
else
{
while(..)
{
..
#
}
a. 3
b. 4
c. 7d Noneof these
```

19-41.6375->convert into binary
20-binary tree has how many null pointers ptrs
a. n
b. $\mathrm{n}+1$ (ans)
c. 2 n

21- No of comparisons in the worst case in Merge sort
a. 2 n
b. 2n-1 (ans)
c. $2 \mathrm{n}-2$
d. $2 \mathrm{n}+1$

22-path testing
a. black box
b. white box(ans)
23. Which of the following is true for NFS.
a. It is stateless. (ans)

## 24-ICV ques

25- A client wants to synchronise it clock with the server over
TCP but the reply packet send time that is already past then what will it do
a. Client will immediately set its clock to the recieved time
b. Client will ignore the reply.
c. Client will repeatedly send the time requests till the time received is longer than its clock.

26-How control in tCP is when
ans congestion ..
27- In order to have a assembly language procedure reentrant what will be done.

28-program counter incremented in which stage.
a.Fetch

29-ordered binary tree \& hash -which is better
30-time server
31-why does dram need refreshing periodically.
a. it contains flip flops
b. its charge gets depleted due to memory read
c. its charge gets leaked (ans)

32- some insert algoritms given like
insert(..)
\{
$\ddot{ }$
where is it used.
a. binary search
b. interpolating search
c. sequential search

33- In context switching which of the phases takes longer time
a. flushing the translation lookaside buffer
b. swapping out the process to the disk
c. saving the registers
d. loading the new process from the disk (ans)

34- the use of static declaration for external variables
a. localising scope (ans)
b.

35-. If a precondition of a sub routine fails then
a. post condition fails as well
b. Post condition may fail
c. post condition is declared but now defined.
d. post condtion never fails (ans)

36 9. consider the SQL statement "CREATE TABLE NEW AS SELECT * FROM EMP"
a. the sql stament is a correct one (ans)
b. New is reservd word there is an error
c. you can't select anything while creating a table
d. NEW should have been in quotes

37- If $X$ and $Y$ are two attriubutes of a relation and 1 and 2 be any two
tuples in that relation
Y is fuctionally dpndant on X iff ( $\mathrm{X}->\mathrm{Y}$ )
a. if $(x 1=x 2)$ then $y 1==y 2$ (ans)
b. if $(x 1==y 1)$ then $x 2==y 2$
someother combinations
38- Whic is false about Java strings

1. The are Null terminated (ans)
2. Set of Chars
3. The Condition checking $==$ and $=$ on a sme pair of strings gives different results.

39- When a java Applet is downloaded what does bytecode verifier do
a. checks the magic nubmer (ans)
b. checks the bytecode whether it has been written properly
c.

40- given a domain name which of the following does not find the IP address
a. /etc/hosts
b. ARP (ans)
b. RARP
c. DHCP

41- an packet for address 202.15.46.45 is to be sent.the machine does not have info about 202.0.0.0 or 202.15.0.0 0r 202.15.46.0. so what will be done
a.discard the packet
b.send the mesg to a default gateway if available (ans)
c.send mesg to a DNS server if available
d..

42- A:"cohesion is a desirable property"
$\mathrm{B}:$ "cohesion means the property that the entire unit is one.."
a.both are correct (ans)
b.both are wrong
c.first wrong second correct
d.first correct second wrong

43- the memory reference time for cache is 100 ms and for memory is 1000 ms .the probalility of a hot is .9 .the average memory access time is
a:100
b:200(ans)
c:500
d: 1000
44- what do you use when you want to have differnt phases of instruction to get exedcuted in different units
a. pipeline (ans)

45- By Codd's rules for RDBMS whih one of following is not right?
a. null values $r$ not defined
b. Integrity constraints are placed in separate files (ans)

## Top 10 Interview Tips OF Hughes:

Here are the 10 most commonly asked questions in the job interview, which will help you prepare yourself better for the forthcoming campus placement and also give you a competitive edge over others.

A well thought out answer to these questions, prepared and rehearsed in advance with the logical sequencing of the events will help you sail through.

1. Tell us about yourself

This is an open canvas for you giving you an opportunity to direct and lead your interview in the direction you want. Good idea will be to structure your answer in the following three broad heads:
Family Background
Educational Background (starting from schooling to
professional qualifications)
Achievements
In all the above subheads speak only that information which will give strength to your candidature. Avoid verbose description of yourself.
2. Why do you want to join us?

To answer this question, you must have researched the company well. Here you can quote some of your personal beliefs, which are in conjunction with the
values of the company or talk about specific products and services which could be your professional interest too.

In the event where your skill set is mapping with the requirement of the company, do not miss the chance to highlight the same. Specify the initiatives taken or work done to attain that skill set.
3. What would you like to be doing five years from now?

This question is asked to assess candidates career plan and ambition for growth and to see if the company will be able to provide that opportunity over period of time. Also to assess if your personal goals are not totally off tangent with what companys objectives are. It is also to check your stability with the organization. It is good idea to be very realistic in your answer. If need be take guidance from your seniors who are already in the corporate environment.
4. Do you prefer working with others or alone?

This question is usually asked to determine whether you are a team player.
Before answering, however, be sure you know whether the job requires you to work alone. Then answer appropriately.
5. What are your biggest accomplishments

You may like to begin your reply with: "Although I feel my biggest
achievements are still ahead of me, I am proud of my involvement withI made my contribution as part of that team and learnt a lot in the process". It will
be a good idea to close your answer with also specifying what attributes and circumstances made you succeed.
6. What are your favorite subjects

It is a leading question giving direction to the panel members for possible areas where they can probe in further for your knowledge base and in depth understanding. It is advisable to select the topics that you are competent in.
7. Why should we hire you?

Keep your answer short and to the point. You should highlight areas from your background that relates to the need of the organization. Recap the organizations description of the job, meeting it point by point with your skills.
8. What are your hobbies?

This question is generally asked to assess whether you are "desktop" kind of a person or an "interaction orientated person". It also indicates your preference for team - oriented activities or projects with solo contributions. It enables the organization to place you accordingly after selection. Be candid with your answer.
9. What is the worst feedback you have ever got?

To answer this question you must admit and share your areas of improvement. Also sharing an action plan for improving oneself will indicate your ability to take criticism well. Your answer should be reflection of your open-mindedness.
10. What is the most difficult situation you have faced?

Here you should be ready with the real life story. The question looks for information on two fronts: How do you define difficult? and, what was your handling of the situation? You should be able to clearly lay down the road map for solving the problem, your ability to do task management and maintain good interaction with your team members and other peers. It is advisable to close with highlighting the learning out of the incident.

## Interview tips-

==> 1.Family background.
$==>2$.Ur interest.Say only the things $u$ know.Sometimes they can ask wayward questions regarding ur project so be prepared for that.
$==>3$.U should have fair idea abut the sub. mentioned in ur resume.
$==>4$.If u don't know anything say NO.
$==>5$.Try to get stuck in the topic which u know thoroughly.Like one of my friends got stuck in tcp/ip networking and he got thru.
$==>6$. In our college four groups were taking interview so some of us were unlucky as the judgement varies.
$==>7$.Why do $u$ want to join hughes.For this get the answer from their ppt.
$==>8$.If ur given a project in some other field would $u$ work. Say
yes i would try to succeed in every task assigned to me.
$==>9$. They can ask $u$ to write some algo in datastructure like bubble sort , quick sort etc.
==>
$==>$ Mostly the technical questions varied from person to person
but generally was concerning their project.Unfortunately they asked m\$
==>

About hss - for us
the interview was basically on summer project, networking - routers / congestion control in tcp etc, some os fundas .HR part was a modified version of the stuff on the web site - strength/weakness, can u work in a gp, do $u$ have problems asking ques to ppl, ur future plans, gre .
i think i didnt get it bec. i told them that i plan to do an ms.
books

1. Quantitative apt from RS agarwal
2. Verbal and non verbal reasoning by RS AGARWAL

Only aptitude test is there.
paper contain 3-part
1.quantitative
2.reasoning
3.again quantitative type
total $20+13+12$ question $=45$ Q's no negative marking and time 45 minute
pattern of questions
1.first qestion on figure which is easy only one question in paper.(c)
2.11235 ..
ans:8
3.odd man out - 10 ques from(1)
4. Code for ABCDE is KLMN then code for BEC is ?
5. Array has N elements . To reverse it the subscript should be? $\operatorname{hint} \mathrm{A}(\mathrm{N}-\mathrm{I}), \mathrm{I}=0,1, \ldots$.
6. There r 800 coins and 1 is of lesser weight. Identify it? hint : divide by 2 . anad compare .. binary tree
7. Question on permutation and combination like- five alphbets $r$ there, one is repeating 2 times. its probability?
8. Questions like. $\mathrm{A}>\mathrm{B}, \mathrm{B}>\mathrm{C}$.. find relation $\mathrm{b} / \mathrm{n}$ others
9.A programme has a complexity of $n$ at the first stage and $n^{\wedge} 2$ in the
second stage and $\mathrm{n}^{\wedge} 3$ in the third stage.find overall complexity?
Ans: $\mathrm{n}^{\wedge} 3$ (highest)
10. 5 questions on veinn diagram from book (2)
11. 2 questions on relations.
12. Code for MEN is 13-5-14 and TEN . Code for QUIZ is ... hint : ( code for letter is its order ie for E-5.

13:reasoing:in question 5 dish and 3 drink is given and some codition is give like
1.you will not take coffee and tea both 2.doctor advise you not to take some two dish given. and like two more condition is given a:which drink alwayes taken by person ans:orange juish.
this is easy question.
14:second reasoinig question is like jone in rank above david and like 3 to 4 statment is give. and question is like.
1.who is at higest rank.
2.if merry is at rank 3 than the rank of david. this type question you can find in many book.
Some more q's ( from Delhi )

## hi friends

there are three section . there are 44 question in all three section .the time is 45 mainutes.it\$
section I-20 question.
section II-11 question. it is GRE resoning .you can easyly do these section. section III-13 question
there is no time limitatioin in individual section .so do not bothere for that.

1. there is question on figure it is easy.
ans d) correct
2. there are 1800 coins .one soin is defective in that .in how many minimum times you can find that the coin is defective.
a) 11
b) 9
c) 7
d) 2
3. there are two kind of professonal in a company software \& personal.if the
personal are $15 \%$ of the total .a party is going .in a party if $50 \%$ of the total professonal left and all are $\mathrm{s} / \mathrm{w}$ then what is the ratio of the $\mathrm{s} / \mathrm{w}$ professonal left to total software professonal.
ans b) $10 / 174$. what is the probebility of the talking out two card one king and one quene of black in a card packet.
ans d) 1/663 (ckeck)
5.11235 ... 13
ans 8
6.there are two more question of series .they are easy.
7.there are two question of coding and decoding.they are also easy.
8.how many word are be formed by by a 5 alphbet ward in which one word is twice.(I don't rembere the exact word)
ans 60 (correct0
9.there is one question on price rise and fall.
ans $1 \%$ decrese in price.
4. 1,7,17,31,--,71
ans 49
section II
in this there are easy question on reasoning like GRE. I don't remember the passage and question.there are 11 question in this There were two papers one was aptitude ( 36 questions) and other was technical(20 questions)

1: given an expression tree and asked us to write the in fix of that expression four choices

2: global variables in different files are
a:at compiletime
b) loading time
c) linking time
d)execution time
3) size of(int)
a) always 2 bytes
b) depends on compiler that is being used
c) always 32 bits
d) can't tell
4)which one will over flow given two programs

2 prog 1: prog2:

```
main() main()
{ {
int fact; int fact=0
long int }\textrm{x}\mathrm{ ; for(i=1;i<=n;i++)
fact=factoral(x); fact=fact*i;
    } }
    int factorial(long int x)
{
if(x>1) return(x*factorial(x-1);
}
```

a) program 1 ;
b) program 2 ;
c) both $1 \& 2$
d) none
\}
5) variables of fuction call are allocated in
a) registers and stack
b) registers and heap
c) stack and heap
d)
6) avg and worst case time of sorted binary tree
7) data structure used for proority queue
a) linked list b) double linkedd list c)array d) tree
8)
main() \{
char str[5]="hello";
if(str==NULL) printf("string null");
else printf("string not null");
\}
what is out put of the program?
a) string is null $b$ ) string is not null $c$ ) error in program $d$ ) it executes but $p$ rint nothing

