

This text file has info on 4 papers.

#### Hughes Company info:

Hughes is a very big company. I don't know the exact package of this company . I talked with a employee of this company who is working for last four years. He told me that four year back its package was 3.25 Lakhs per anum. then they made it 2.75 lakhs per anum. Recently it was 2.90 Lakhs per anum. Hence Its one of the biggest for freshers. He also told me that their are very good chance to be sent to abroad and most probably you will have your first trip to abroad within a year.

#### About Interview:

interview would be of about 1 to 1.30 hrs duration mainly focused on C,C++ ,OS,DS,Networking and your project. If you do well in this technical interview then HR panel will join the interview.

#### Written Test:

written paper contained 50 question divided into three section

- 1.Quantitative aptitude(no reasoning or English) (10 Questions)
- 2.Programming aptitude(C,C++ programs and DS related questions) (20 Questions)
- 3.Theoretical Knowledge(networking, OS, communication,digital,computer architecture ) (20 Questions)

total time was 60 minutes composite. There was four options for each questions and we have to choose one. For each Wright answer +3 marks and for each wrong answer -1 mark (note that negative marking is 3:1 not 4:1).

# stands for some numerical data which I don't remember.

#### Quantitative aptitude:

- 1.) Avg of seven consecutive numbers is # if next four numbers are also added then by how much the average will increase by?
- 2.) when a bus runs without stopping any where its avg speed is 45 km/h. when it stops at stops its avg speed is 42 km/h. how much minutes it stops in 2 hours?
- 3) A bus travel  $\frac{1}{3}$  distance by #1 speed  $\frac{2}{3}$  distance by #2 speed how much will it travel in one hour?
- 4) when #1 is multiplied by certain number incorrect result achieved is #2. if all the digits of #2 except 3rd and 4th digit are correct then what is the correct result?
- 5.) if a is shorter then be and co is taller then a then which is true  
(I) be is taller then co, (ii) co is taller then be, (iii) be and co are equal, (iv) insufficient data
- 6.) In a family there is grand father, father and mother, There are five sons of father. each son have five sons how many males are their in family?
- 7.) if ration of work rate of two person is 1:  $\frac{1}{4}$  then what will be the ratio of time taken to complete a work?

#### Programming Aptitude:

- 1.) when inserting an element in link list  
(I) previous element is moved

- (ii) next element is moved
- (iii) no movement
- (iv) none of this
- 2.) one question in which there is no break after case and output was to be calculated
- 3.) a question in which (condition `&& be++`) was there and condition was false so `be++` was not executed and we have to calculate the output.
- 4.) value of I
 

```
for(I=0;I<=9;++I)
  print("%d",I);
  i=i*20-1;
```
- 5.) Output of
 

```
myfunc(int &val)
{ printf("%d", val);
}
```

 call this fn as
 

```
int b=0;
myfunc(b++)
```
- 6.) if length of two strings in co is m and n then length of their concatenation string
  - (i) always greater than m+n
  - (ii) always less than m+n
  - (iii) always equal to m+n
  - (iv) none of these
- 7.) a question on infinite recursion

#### Theoretical Knowledge:

- 1.) which is true
  - (I) internal fragmentation is segmentation external in paging
  - (ii) internal fragmentation is paging external in segmentation
  - (iii) internal fragmentation is segmentation external in segmentation
  - (iv) internal fragmentation is paging external in paging
- 2.) simplify Boolean \_expression  $ab+ab'+bc$
- 3.) simply Boolean \_expression (one more \_expression was given)
- 4.) Mutex are used to handle entry in critical region which is true
  - (I) Mutex is locked when entered in critical region
  - (II) Mutex is unlocked when entered in critical region
  - (iii) can be done in either way
  - (iv) don't remember
- 5.) maximum information that can be transferred in a noise free channel is limited by
  - (I) its bandwidth
  - (ii) speed of light
  - (iii) don't remember
  - (iii) don't remember
- 6.) one numerical related to communication (Shannon theorem I think)
- 7.) a device which work on network layer is called
  - (I) Router

- (ii) Bridge
  - (iii) Repeater
  - (iv) none of these
- 8.) if there are n address line and m data line then max size of RAM that can be used is
- (I)  $2^n \times m$  bytes
  - (ii)  $2^n \times m$  bits
  - (iii)  $2^m \times n$  bytes
  - (iv)  $2^m \times n$  bits
- 9.) if 12 bits are used in PCM then how many quantization level are there?
- 10.) ADPCM
- (I) is adaptation PCM for video
  - (ii) requires less bandwidth
  - (iii) has good quality
  - (iv) don't remember
- 11.) a same program on CISC and RISC then for size of program
- (I) program on CISC is shorter than RISC
  - (ii) program on RISC is shorter than CISC
  - (iii) program on CISC and RISC are equal in size
  - (iv) none of these
- 12.) how UDP can be made reliable
- (I) cant be made
  - (ii) by using acknowledgements on application layer
  - (iii) don't remember
  - (iv) don't remember
- 13.) a very simple question on round robin scheduling time to complete a process was to be calculated.
- 14.) if access time of cache is #1 and of main memory is #2 hit ratio is 0.9 calculate avg access time

Technical Questions: there are total 30 questions but I remember this much.

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;`
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, files 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.

Aptitude Questions:

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

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OFF CAMPUS -----

1st section was aptitude consisting of 20 ques which are damn easy  
Attempt 15-16 ques frm them coz thr is an upper cutoff too.

2nd section had two options

- 1.) Computers
- 2.) Electronics

if u r CS grad u can attempt electronics paper too n vice versa.  
both the sections had 30 ques tho abt 15 are common in both.

Networking questinos turned out to be a bit difficult IPv6 stuff ,DHCP etc.  
& Basic networking fundas, OSI , TCP/IP model, what all the layers do.etc..

Questions on Binary trees also may appear,

1. One question of Set Theory Like there Are two sets A and B and  
 $(A-B) \cup (B-A) \cup (A \cap B)$   
is equivalent to

Ans. A union B

Union and intersection are in there sign conventions.

2. 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)

3. Of Newton Rapson method...

Ans. Converges to root2(check it)

4. Of power set A set contains  $\{(f_i), a, \{a, b\}\}$  what is the powerset of it

Ans. 8

5. A question of logic gates

Ans. U can got the answer very easily

6. A question on the Booths algo

Ans. The sequence is 10101010101010

7. Relative addressing mode is used for

Ans. Dont know.

8. How many 4 input multiplexer will be used for making of an 16 pin multiplexer

Ans. 8.

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 channel 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 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. What 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. What is garbage collector.

Ans. Find out :)