

HCL Placement Paper 10

HCL Technology Interview 2004 in MKU

Technical interview is held for 30 min to 1 hr 20min depending upon the stuff. Concentrated areas are

- 1) OS Concepts
- 2) C Programming skill
- 3) OOPs concepts
- 4) Basics of Networking
- 5) Data structures

Only basic QP like

- 1) What is fragmentation? How do overcome?
- 2) What is semaphore?
- 3) What are the IPC Mechanism available? Illustrate with example
- 4) What is structure and union in c? write the code and explain how they are storing in the memory?
- 5) They will ask to write one c program ?
- 6) Explain the data struture (code) for the data structures
 - i) Double linklist
 - ii) Minimum spanning tree
 - iii) BFS and DFS
 - iv) AVL tree
 - v) Reverse the linklist
- 7) Difference between malloc and calloc?
- 8) write a prg in macro in c?
- 9) Write a simple MFC program to create a window? (They aaked me write a prg to create a window)
- 10) Tell about the existing scheduling algorithm?
- 11) what are all E.F.Codd rule?
- 12) what is bit slice processor?
- 13) what is a deadlock? explain it?
- 14) what is virtual memory?
- 15) what is circuit switching and packet switching
- 16) What is the significance of friend keyword in C++?
- 17) Different types of inheritance?
- 18) do u want to ask anything from us?

HR interview

This ranges from 20 min to 45 min. They expecting ur

- i) Focussing towards the technology
 - ii) Adaptability
 - iii) Family Background
 - iv) Team spirit
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- i) Tell abt yourself?
 - ii) what are all ur hobbies?
 - iii)why did u prefer your area of interest?
 - iv) why did u wanna be in HCL?
 - v) why did u choose MCA?
 - vi) howz interview is going on?
 - vii) Some general technical qp from ur area of interest?
 - viii) how'll u react if u r assigned in the non area of interest? (adaptability)
 - ix) how're getting information abt the company?
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Section II - C Programming

1. Which of the following about the following two declaration is true

- i) int *F()
- ii) int (*F)()

Choice :

- a) Both are identical
- b) The first is a correct declaration and the second is wrong
- c) The first declaration is a function returning a pointer to an integer and the second is a pointer to function returning int
- d) Both are different ways of declaring pointer to a function

Answer : c) The first de...

2. What are the values printed by the following program?

```
#define dprint(expr) printf(#expr "=%d\n",expr)

main()
{
int x=7;
int y=3;
dprintf(x/y);
}
```

Choice:

- a) #2 = 2 b) expr=2 c) x/y=2 d) none

Answer: c)x/y=2

3. Which of the following is true of the following program

```
main()
{
char *c;
int *p;
c =(char *)malloc(100);
ip=(int *)c;
free(ip);
}
```

choice:

- a) The code functions properly releasing all the memory allocated
- b) Results in compilation error as pointer of various types cannot be equated
- c) The program tries to ault d)const e) void

Answer : b) function

6. When an array is passed as parameter to a function, which of the following statement is correct

choice:

- a) The function can change values in the original array
- b) In C parameters are passed by value. The function cannot change the original value in the array
- c) It results in compilation error when the function tries to access the elements in the array
- d) Results in a run time error when the function tries to access the elements in the array

Answer: a) The fu...

7. The type of the controlling expression of a switch statement cannot be of the type

- a) int b) char c) short d)float e) none

Answer : d)float

8.What is the value of the expression $(3^6) + (a^a)$?

- a) 3 b) 5 c) 6 d) a+18 e) None

Answer :

9. What is the value assigned to the variable X if b is 7 ?

$X = b > 8 ? b << 3 : b > 4 ? b >> 1 : b;$

- a) 7 b) 28 c) 3 d) 14 e) None

10. Which is the output produced by the following program

```
main()
{
int n=2;
printf("%d %d\n", ++n, n*n);
}
```

a) 3,6 b) 3,4 c) 2,4 d) cannot determine

Answer : b) 3,4

11. What is the output of the following program?

```
int x= 0x65;
main()
{
char x;
printf("%d\n",x)
}
```

a) compilation error b) 'A' c) 65 d) unidentified

12. What is the output of the following program

```
main()
{
int a=10;
int b=6;

if(a=3)
b++;
printf("%d %d\n",a,b++);
}
```

a) 10,6 b)10,7 c) 3,6 d) 3,7 e) none

Answer : d) 3,7

13. What can be said of the following program?

```
main()
{
enum Months {JAN =1,FEB,MAR,APR};
Months X = JAN;
if(X==1)
{
printf("Jan is the first month");
}
}
```

a) Does not print anything
b) Prints : Jan is the first month
c) Generates compilation error
d) Results in runtime error

Answer: b) Prints : Jan..

14. What is the output of the following program?

```
main()
{
char *src = "Hello World";
char dst[100];
strcpy(src,dst);
printf("%s",dst);
}
strcpy(char *dst,char *src)
{
while(*src) *dst++ = *src++;
}
```

a) "Hello World" b)"Hello" c)"World" d) NULL e) unidentified

Answer: d) NULL

15. What is the output of the following program?

```

main()
{
int l=6;
switch(l)
{ default : l+=2;
case 4: l=4;
case 5: l++;
break;
}
printf("%d",l);
}
a)8 b)6 c)5 d)4 e)none

```

Answer : c)5

16. What is the output of the following program?

```

main()
{
int x=20;
int y=10;
swap(x,y);
printf("%d %d",y,x+2);
}
swap(int x,int y)
{
int temp;
temp =x;
x=y;
y=temp;
}

```

a)10,20 b) 20,12 c) 22,10 d)10,22 e)none

Answer:d)10,22

17. What is the output of the following problem ?

```

#define INC(X) X++
main()
{
int X=4;
printf("%d",INC(X++));
}

```

a)4 b)5 c)6 d)compilation error e) runtime error

Answer : d) compilation error

18. what can be said of the following

```

struct Node {
char *word;
int count;
struct Node left;
struct Node right;
}

```

- a) Incorrect definition
- b) structures cannot refer to other structure
- c) Structures can refer to themselves. Hence the statement is OK
- d) Structures can refer to maximum of one other structure

Answer :c)

19. What is the size of the following union.

Assume that the size of int =2, size of float =4 and size of char =1.

```

Union Tag{
int a;
float b;
char c;
}

```

};

a)2 b)4 c)1 d) 7

20) What is the output of the following program? (. has been used to indicate a space)

```
main()
{
char s[]="Hello,.world";
printf("%15.10s",s);
}
```

- a)Hello,.World...
- b)....Hello,.Wor
- c)Hello,.Wor....
- d)None of the above

- (1) The combined length of the longer two pieces of rope is 12 metres.
- (2) The combined length of the shorter two pieces of rope is 11 metres.

(A) (B) (C) (D) (E)

10) A certain company paid bonuses of Rs. 125 to each of its executive employees and Rs 75 to each of its nonexecutive employees. If 100 of the employees were nonexecutive, how many were executive?

- 1) The company has a total of 120 employees
- 2) The total amount that the company paid in bonuses to its employees was Rs.10,000

(A) (B) (C) (D) (E)

11. What fraction of his salary did Mr. Johnson put into savings last week ?

- 1) Last week Mr.Johnson put Rs 17 into savings.
- 2) Last week Mr.Johnson put 5% of his salary into savings.

(A) (B) (C) (D) (E)

12. Each M-type memory unit will increase the base memory capacity of a certain computer by 3 megabytes. What is the base memory capacity, in megabytes, of the computer ?

- 1) 2 M-type memory units will increase the computer's base memory capacity by 300%
- 2) The memory capacity of the computer after 2-M type memory units are added to the base memory capacity, is 1.6 times the memory capacity of the computer after 1 M-type unit is added to the base memory capacity.

(A) (B) (C) (D) (E)

13. What fractional part of the total surface area of cube C is red?

- 1) Each of 3 faces of C is exactly 1/2 red
- 2) Each of 3 faces of C is entirely white

(A) (B) (C) (D) (E)