

HCL Sample Paper

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Section A

1. Which of the following involves context switch,

- (a) system call
- (b) privileged instruction
- (c) floating point exception
- (d) all the above
- (e) none of the above

Ans: (a)

2. In OST, terminal emulation is done in

- (a) sessions layer
- (b) application layer
- (c) presentation layer
- (d) transport layer

Ans: (b)

3. For a 25MHz processor , what is the time taken by the instruction which needs 3 clock cycles,

- (a) 120 nano secs
- (b) 120 micro secs
- (c) 75 nano secs
- (d) 75 micro secs

4. For 1 MB memory, the number of address lines required,

- (a) 11
- (b) 16
- (c) 22

(d) 24

Ans. (b)

5. Semaphore is used for

- (a) synchronization
- (b) dead-lock avoidance
- (c) box
- (d) none

Ans. (a)

6. Which holds true for the following statement

```
class c: public A, public B
```

- a) 2 member in class A, B should not have same name
- b) 2 member in class A, C should not have same name
- c) both
- d) none

Ans. (a)

7. Question related to java

8. OLE is used in

- a) inter connection in unix
- b) interconnection in WINDOWS
- c) interconnection in WINDOWS NT

9. Convert a given HEX number to OCTAL

10. Macros and function are related in what aspect?

- (a) recursion
- (b) varying no of arguments
- (c) hypochecking
- (d) type declaration

11. Preprocessor.. does not do which one of the following

- (a) macro
- (b) conditional compilation
- (c) in type checking
- (d) including load file

Ans. (c)

12. Piggy backing is a technique for

- a) Flow control
- b) Sequence
- c) Acknowledgement
- d) retransmission

Ans. (c)

13. In signed magnitude notation what is the minimum value that can be represented with 8 bits

- (a) -128
- (b) -255
- (c) -127
- (d) 0

14. There is an employer table with key fields as employer number data in every n'th row are needed for a simple following queries will get required results.

- (a) select A employee number from employee A , where exists from employee B where A employee no. \geq B employee having (count(*) mod n)=0
- (b) select employee number from employee A, employee B where A employee number \geq B employee number group by employee number having(count(*) mod n=0)
- (c) both (a) & (b)
- (d) none of the above

15. Type duplicates of a row in a table customer with non uniform key field customer number you can see

- a) delete from customer where customer number exists(select distinct customer number from customer having count)

- b) delete customer a where customer number in b rowid
- c) delete customer a where customer number in (select customer number from customer a, customer b)
- d) none of the above

Section B

1. Given the following statement

```
enum day = { jan = 1 ,feb=4, april, may}
```

What is the value of may?

- (a) 4
- (b) 5
- (c) 6
- (d) 11
- (e) None of the above

2. Find the output for the following C program

```
main
{int x,j,k;
j=k=6;x=2;
x=j*k;
printf("%d", x);
```

3. Find the output for the following C program

```
fn f(x)
{ if(x<=0)
return;
else f(x-1)+x;
}
```

4. Find the output for the following C program

```
i=20,k=0;
for(j=1;j<i;j=1+4*(i/j))
{k+=j<10?4:3;
}
printf("%d", k);
```

Ans. k=4

5. Find the output for the following C program

```
int i =10
main()
{int i =20,n;
for(n=0;n<=i;)
{int i=10;
i++;
}
printf("%d", i);
```

Ans. i=20

6. Find the output for the following C program

```
int x=5;
y= x&y
```

7. Find the output for the following C program

```
Y=10;
if( Y++>9 && Y++!=10 && Y++>10)
{printf("%d", Y);
else
printf("%d", Y);
}
```

Ans. 13

8. Find the output for the following C program

```
f=(x>y)?x:y
```

- a) f points to max of x and y
- b) f points to min of x and y
- c) error

Ans. (a)

9. What is the sizeof(long int)

- (a) 4 bytes
- (b) 2 bytes
- (c) compiler dependent
- (d) 8 bytes

10. Which of the function operator cannot be over loaded

- (a) <=
- (b) ?:
- (c) ==
- (d) *

11. Find the output for the following C program

```
main()
{int x=2,y=6,z=6;
x=y==z;
printf("%d",x)
}
```

Section C (Programming Skills)

Answer the questions based on the following program

```
STRUCT DOUBLELIST
{ DOUBLE CLINKED
INT DET; LIST VOID
STRUCT PREVIOUS; (BE GIVEN AND A PROCEDURE TO DELETE)
STRUCT NEW; (AN ELEMENT WILL BE GIVEN)
}
DELETE(STRUCT NODE)
{NODE-PREV-NEXT NODE-NEXT;
NODE-NEXT-PREV NODE-PREV;
IF(NODE==HEAD)
NODE
}
```

Q. In what case the prev was

- (a) All cases
- (b) It does not work for the last element

- (c) It does not for the first element
- (d) None of these

Answer the questions based on the following program

```
VOID FUNCTION(INT KK)
{KK+=20;
}
VOID FUNCTION (INT K)
INT MM,N=&M
KN = K
KN+ -=10;
}
```

Q. What is the output of the following program

```
main()
{ int var=25,varp;
varp=&var;
varp p = 10;
fnc(varp)
printf("%d%d,var,varp);
}
```

- (a) 20,55
- (b) 35,35
- (c) 25,25
- (d)55,55

Section D

1. a=2, b=3, c=6

Find the value of $c/(a+b)-(a+b)/c$

2. What does the hexanumber E78 in radix 7.

- (a) 12455
- (b) 14153
- (c) 14256
- (d) 13541
- (e) 131112

Ans. (d)

3. 10 : 4 seconds :: ? : 6 minutes

Ans. 900

4. Q is not equal to zero and $k = (Q \times n - s)/2$. What is n?

- (a) $(2 \times k + s)/Q$
- (b) $(2 \times s \times k)/Q$
- (c) $(2 \times k - s)/Q$
- (d) $(2 \times k + s \times Q)/Q$
- (e) $(k + s)/Q$

5. From the following statements determine the order of ranking

- M has double the amount as D
- Y has 3 rupees more than half the amount of D

Ans. Data insufficient

Questions 6 - 10 are to be answered on the following data

- A causes B or C, but not both
- F occurs only if B occurs
- D occurs if B or C occurs
- E occurs only if C occurs
- J occurs only if E or F occurs
- D causes G, H or both
- H occurs if E occurs
- G occurs if F occurs

6. If A occurs which of the following must occur

- I. F and G
- II. E and H
- III. D

- (a) I only
- (b) II only
- (c) III only
- (d) I, II, & III

(e) I & II (or) II & III but not both

Ans. (e)

7. If B occurs which must occur

- (a) D
- (b) D and G
- (c) G and H
- (d) F and G
- (e) J

Ans. (a)

8. If J occurs which must have occurred

- (a) E
- (b) either B or C
- (c) both E & F
- (d) B
- (e) both B & C

Ans. (b)

9. Which may occurs as a result of cause not mentioned

- I. D
- II. A
- III. F

- (a) I only
- (b) II only
- (c) I & II
- (d) II & III
- (e) I, II & III

Ans. (c)

10. E occurs which one cannot occurs

- (a) A
- (b) F
- (c) D
- (d) C

(e) J

Ans. (b)