

HCL Technologies

Q) Piggy backing is a technique for

a) Flow control b) sequence c) Acknowledgement d) retransmission

ans: c

Q) The layer in the OST model handles terminal emulation

a) session b) application c) presentation d) transport

ans: b application

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

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

Q) There is an employer table with key fields as employer no. data in every n'th row are needed for a simple following queries will get required results.

a) select A employe no. from employe A , where exists from employe B where A employe no. >= B employe having (count(\*) mod n)=0

b) select employe no. from employe A, employe B where

A employe no. >= B employ no. grouply employe no. having (count(\*) mod n=0 )

c) both a & b

d) none of the above

Q) Type duplicates of a row in a table customer with non uniform key field customer no. you can see

a) delete from costomer where customer no. exists

( select distinct customer no. from customer having count )

b) delete customer a where customer no. in

b rowid

c) delete customer a where cusermor no. in

( select customer no. from customer a, customer b )

d) none of the above

Q) long int size

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

ans: compiler dependent

Q) x=2, y=6, z=6

x=y==z;

printf("%d", x) ?

Q) what does the hexanumber E78 in radix 7.

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

ans: (d)

Q) Q is not equal to zero and  $k = (Q \times n - s)/2$  find 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)  $(k + s)/Q$

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

NOTE: check following answers.

Q). If A occurs which of the following must occur

I. F & 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)

Q). If B occurs which must occur

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

ans: (a)

Q). 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)

Q). which may occur as a result of cause not mentioned

(1) D (2) A (3) F

(a) 1 only (b) 2 only (c) 1 & 2 (d) 2 & 3 (e) 1,2,3

ans: (c)

Q). E occurs which one cannot occur

(a) A (b) F (c) D (d) C (e) J

ans: (b)

1.  $a=2, b=3, c=6$  Find the value of  $c/(a+b)-(a+b)/c$

Ans.  $11/30$

2. What does the hexa number E78 in radix 7.

(a) 12455

(b) 14153

(c) 14256

(d) 13541

(e) 131112

Ans. (d)

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

Ans. 90

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 occur 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 occur

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

Ans. (b)

11. A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salt. If 1.5 litres of the solution spills out of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution in the jug is salt?

- (A) 7.5%      (B) 9.5%      (C) 10.5%      (D) 12%      (E) 15%

12. Working independently, Tina can do a certain job in 12 hours. Working independently, Ann can do the same job in 9 hours. If Tina works independently at the job for 8 hours and then Ann works independently, how many hours will it take Ann to complete the remainder of the job?

- (A) 2/3      (B) 3/4      (C) 1      (D) 2      (E) 3

Answer : E) 3

13. In a murder case there are four suspects P, Q, R, S. Each of them makes a statement. They are p:

"I had gone to the theatre with S at the time of the murder". q:  
"I was playing cards with P at the time of the murder". r: "Q didn't commit the murder". s: "R is not the murderer". Assuming the only one of the above statements is false and that one of them is the murderer, who is the murderer?

- a) P
- b) Q
- c) R
- d) Cannot be concluded
- e) S

Ans: E

14. Mohan earned twice as much as Deep. Yogesh earned rs.3/- more than half as much as Deep. If the amounts earned by Mohan, Deep, Yogesh are M, D, Y respectively, Which of the following is the correct ordering of these amounts?

- a)  $M < D < Y$
- b)  $M < Y < D$
- c)  $D < M < Y$
- d) It cannot be determined from the information given
- e)  $D < Y < M$



for a brief time and at that point the knights can, if they wish, rearrange their travelling parties before continuing, again in two parties along separate northern and southern routes. Throughout the entire trip, the composition of traveling parties must be in accord with the following conditions P and R are deadly enemies and, although they may meet briefly, can never travel together. p must travel in the same party with s  
Q can't travel by the southern route U can't change routes

21. If one of the two parties of knights consists of P and U and two other knights and travels by the southern route, the other members of this party besides P and U must be
- a) Q and S
  - b) Q and T
  - c) R and S
  - d) R and T
  - e) S and T
- Ans: e

22. If each of the two parties of knights consists of exactly three members, which of the following is not a possible travelling party and route?
- a) P,S,U by the northern route
  - b) P,S,T by the northern route
  - c) P,S,T by the southern route
  - d) P,S,U by the southern route
  - e) Q,R,T by the southern route
- Ans: b

- 23) If one of the two parties of knights consists of U and two other knights and travels by the northern route, the other memnbers of this party besides U must be
- a) P and S
  - b) P and T
  - c) Q and R
  - d) Q and T
  - e) R and T
- Ans: c

- 24) If each of the two parties of knights consists of exactly three members of different parties, and R travels by the northern route, then T must travel by the
- a) southern route with P and S
  - b) southern route with Q and R
  - c) southern route with R and U
  - d) northern route with Q and R
  - e) northern route with R and U
- Ans: a

25. If, when the two parties of knights encounter one another after a month, exactly one knight changes from one travelling party to the other travelling party, that knight must be
- a) P
  - b) Q
  - c) R
  - d) S
  - e) T
- Ans: e

26. A gambler bets on the team of seven players ABCDEFG whose winning a-4 to 1 against b-4 to 1 against c-4 to 1 against d-4 to 1 against e-5 to 1 against f-6 to 1 against g. how should he bet on g to set 20% profit.

27. If a person buy radio worth Rs 2468 and pay 7% sales .how much price of radio should reduce to pay only Rs 2468.

- 28 What is vasu salary if salary of vasu is more than rajan salary working in same company  
 i)vasu salary is 100 more than rajan salary.  
 ii)rajan found 2000 allows which is 50 less than vasu.  
 (iii)basic salry of rajan is 1000.  
 (i)only i is required  
 (ii)i & ii is required  
 (iii)i& iii is required  
 (iv)i&ii&iii is required  
 (v)none of these
- 29 If in 100 miles race 8 person is running winner take 9.8sec and fifth man takes 10.4 sec the time of 8 man is  
 in AP if in 4\*100 meters realy of onside is 1,4,5,8 position then win by.  
 a).3 sec      b).1 sec      c).7 sec      d).5 sec  
 e)none
30. How many sons X have qwe based on relation  
 i)  
 ii)  
 iii)  
 ans(data i,ii,iii is insufficient)
31. A sink has 12 lits of water some quantity of water is taken out. if the remainng water is 6 litres less then the water taken out then quantity of water taken out is.  
 a.3  
 b.6  
 c.9  
 d.1
- 32 .which is the 4 digit number whose second digit is thrice the first digit and 3'rd digit is sum of 1'st and 2'nd and last digit is twice the second digit.  
 1.2674  
 2.1349.  
 3.3343  
 4.3678
33. In a straight highway 2 cars starts from the same point in opposite directions each travels for 8 Kms and take left turn then travel for 6 Kms what is the distance between them now.  
 1.16  
 2.20  
 3.25  
 4.10
34. A problem based on house numbers.  
 35. Five students compare their test and quiz marks.some datas given. 5 questions based on this.

### 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 declaraiion 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 declarin 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);
}

```

ans: The code functions properly releasing all the memory allocated

4.output of the following.

```

main()
{
    int i;
    char *p;
    i=0X89;
    p=(char *)i;
    p++;
    printf("%x\n",p);
}

```

ans:0X8A

5 which of the following is not a ANSI C language keyword?

ans: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 : 5

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

ans: 3;

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++;
}
) "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;
    flaot 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

000000000000000000000000000000

Aptitude

1. How many of the integers between 25 and 45 are even ?

(A)21 (B)20 (C)11 (D)10 (E)9

Ans:d)10

2. If taxi fares were Rs 1.00 for the first 1/5 mile and

Rs 0.20 for each 1/5 miles thereafter. The taxi fare for

a 3-mile ride was

(A)Rs 1.56

(B)Rs 2.40

(C)RS 3.00

(D)Rs 3.80

(E)Rs 4.20

Answer :d)Rs 3.80

3. A computer routine was developed to generate two numbers

(x,y) the first being a random number between

0 and 100 inclusive, and the second being less than or

equal to the square root of the first. Each of the following

pair satisfies the routine EXCEPT

(A) (99.10) (B) (85.9) (C) (50.7) (D) (1.1) (E) (1.0)

Answer : A) (99.10)

4. A warehouse had a square floor with area 10,000 sq.meters.

A rectangular addition was built along one entire side

of the warehouse that increased the floor by one-half as much as the original floor. How many meters did the addition extend beyond the original buildings ?

(A)10 (B)20 (C)50 (D)200 (E)500

Ans: c)50

5. A digital wristwatch was set accurately at 8.30 a.m and then lost 2 seconds every 5 minutes. What time was indicated on the watch at 6.30 p.m of the same day if the watch operated continuously that time ?

(A)5:56 (B)5:58 (C)6.00 (D)6.23 (E)6.26

Ans :E) 6.26

6. A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salt. If 1.5 litres of the solution spills out

of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution in the jug is salt?

(A)7.5% (B)9.5% (C) 10.5% (D)12% (E)15%

Ans :A)7.5%

7. A plane travelled K miles in the first 96 miles of flight time. If it completed the remaining 300 miles of the trip in 1 minute, what was its average speed in miles per hour for the entire trip ?

(A)

(B)

(C)

(D)

(E)

Ans : $(300+k)/97 * 60$

8. A merchant sells an item at a 20 percent discount. but still makes a gross profit of 20 percent of the cost.

What percent of cost would be gross profit on the item have been if it had been sold without the discount?

(A)20% (B)40% (C)50% (D)60%

(E)66.6%

Ansr :c) 50%

9. A millionaire bought a job lot of hats  $1/4$  of which were brown. The millionaire sold  $2/3$  of the hats including  $4/5$  of the brown hats. What fraction of the unsold hats were brown.

(A) $1/60$  (B) $1/15$  (C) $3/20$  (D) $3/5$  (E) $3/4$

Ans :c) $3/20$

10. How many integers n greater than and less than 100 are there such that,if the digits of n are reversed, the resulting integer is  $n+9$  ?

(A)5 (B)6 (C)7 (D)8 (E)9

Ans :D)8

11. An investor purchased a shares of stock at a certain price. If the stock increased in price Rs 0.25 per share and the total increase for the x shares was Rs 12.50, how many shares of stock had been purchased ?

(A)25 (B)50 (C)75 (D)100 (E)125

Ans :B)50

12 At a special sale, 5 tickets can be purchased for the price of 3 tickets. If 5 tickets are purchased at the sale, the amount saved will be What percent of the original price of the 5 tickets?

(A) 20% (B) 33.3% (C) 40% (D) 60% (E) 66.6%

Ans :c)40%

13. Working independently, Tina can do a certain job in 12 hours. Working independently, Ann can do the same job in 9 hours. If Tina Works independently at the job for 8 hours and then Ann works independently, how many hours will it take Ann to complete the remainder of the jobs?  
(A) 2/3 (B) 3/4 (C) 1 (D) 2 (E)

3

Ans :E)3

14. A decorator bought a bolt of d m number of red chips in any one stack ?  
(A) 7 (B) 6 (C) 5 (D) 4 (E)

3

Ans :C) 5

15. A sink has 12 lits of water some quantity of water is taken out. if the remainng water is 6 litres less then the water taken out then quantity of water taken out is.  
a. 3  
b. 6  
c. 9  
d. 1

16. which is the 4 digit number whose second digit is thrice the first digit and 3'rd digit is sum of 1'st and 2'nd and last digit is twice the second digit.  
1.2674  
2.1349.  
3.3343  
4.3678

17. In a straight highway 2 cars starts from the same point in opposite directions each travels for 8 Kms and take left turn then travel for 6 Kms what is the distance between them now.  
1.16  
2.20  
3.25  
4.10

4.A problem based on house numbers.

18. Five students compare their test and quiz marks. some datas given. 5 questions based on this.

## Technical Section

- 1 In ANSI C which is such thing is not in Java.  
typedef struct node  
{  
int  
NODEPTR \* NODE  
}  
2 Q. In signed magnitude notation what is the minimum value that can be represented with 8 bits  
a) -128 b) -255 c) -127 d) 0  
3 Q. there is an employer table with key feilds as employer no. data in every n'th row are needed for a simple following queries will get required results.  
a) select A employe no. from employe A , where exists from employe B where A employe no. = B employe having (count(\*) mod n)=0  
b) select employe no. from employe A, employe B where A employe no. = B employ no.  
grouply employe no. having (count(\*) mod n=0 )  
c) both a& b  
d) none of the above  
4. Piggybacking is done for, Ans=>Acknowledgement.  
5. WHICH IS NOT BASIC data type ans.Char\*  
6. which of the following statement is valid for string copy

```

        char *srt,*ptr;
a)   while(*str) {
        *str=*ptr;
        ++str=++ptr;
        }
b ) while(*str)
    {***str=***ptr};
c)
7   Two variable cannt have the same name in
    a)function b) block c) file d)--- C Section
8   #define inc(x) x++
    main()
    {
        int t=1;
        printf("%d",inc(t++));
    }
9 . one or two que for the complicated declaration.
10. Const char *a="Abcd"; char const *a="lmno"; base do this,
Two que were there.
11. char *p ;
    char q[20];
12. int i,*p=&i;
    p=malloc(10);
    free(p);
    printf("%d",p);
    ans : garbage
13. int i=20,*j=&i
    f(i)
    printf("%d",i);
14. #define val 1+2
    printf("%d%d",val/val,val^3)
    ans : 3 9
15. #define "this" "#"
    #define (x,y) x##y
    printf("this","this is")
    ans: compilation error (tested)
16. (2^2)+(a^a)
17. int a ,b=7
    a=b<4?b<<1:b>4?7>>1:a
    ans.3
18. one que on c++ class member function
    ans.d
19. work of memory management unit.
20. who relate virtual memory to physical memory   ans.os
21. memory is allocated to variable
    a)when declared b)when define c)...
22. Question on double linked list
23. Define success 1
    define failure -1
    if(condition)
    printf(success);
    else
        printf(failure);
    ans success
24 . main()
    {
        int var=25,varp;
        varp=&var;
        varp=10;
        fun(varp);
        printf("%d%d",var,varp);
        ans a)45,45 b)55,55 c) 20,55;
25. u r given two statements
    a=(10.15);
    b=10,15;
    if they are executed what is the output   printf("%d%d",a,b);
    a)10,15 b)15,10 c)10,10 d)15,15   ans a
26. define null 0   ans=0;

```



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 employee 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. >= B employee having (count(\*) mod n)=0  
 (b) select employee number from employee A, employee B where A employee number >= 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<=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()
{intx=2,y=6,z=6;
x=y==z;
printf("%d",x)
}

```

### Section C

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
}

```

1. 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;
}

```

2. 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

3. Here is the structure declaration of a doubly linked list

```

struct dlink {
int nodeid;
struct dlink *next;
struct dlink *prev;
} dlink_t;

```

A pointer of the head of the linked list is maintained as a global variable, whose definition is `dlink_t *head;`

The function `remove_element(dlink_t *rp)`, needs to remove the

node

pointed to the `rp` and adjust the head. The first node's `prev` and the last node's `next` are `NULL`. `remove_element(dlink_t *rp)`

```

{
    rp->prev->next = rp->next;
    rp->next->prev = rp->prev;
    if( head == rp)
        head = rp->next;
}

```

Which of the following statement is true about the function `remove_element`

- a) It work when head is the same as `rp`
- b) It does not work when `rp` is the last element on the list
- c) It sets the head of the list correctly
- d) It works in all cases

Answer :B) It does...

4. Consider the following function written in c:

```

#define NULL 0
char *
index(sp,c)
register char *sp,c;
{
do {
    if(*sp == c)
        return (sp);
    } while (*sp++);
return NULL;
}

```

The first argument `sp`, is a pointer to a C string.

The second argument, `c`, is a character. This function searches for the character `c`, in the string. If it is found

a pointer to that location is returned else `NULL` is returned.

This

function works

- a) Always
- b) Always, but fails when the first byte contains the

character `c`

- c) works when `c` is a non `NULL` character only
- d) Works only when the character `c` is found in the string

ans: a

5. What is printed when this program is executed

```

main()
{

```

```

        printf ("%d\n",f(7));
    }
    f(x)
    {
        if ( <= 4)
            return x;
            return f(--x);
    }

```

- a) 4
- b) 5
- c) 6
- d) 7

ans: a

6. On a machine where pointers are 4 bytes long, what happens when the following code is executed.

```

main()
{
    int x=0,*p=0;
    x++; p++;
    printf ("%d and %d\n",x,p);
}

```

- a) 1 and 1 is printed
- b) 1 and 4 is printed
- c) 4 and 4 is printed
- d) causes an exception

7. Which of the following is the correct code for strcpy, that is used to copy the contents from src to dest?

- a) 

```
strcpy (char *dst,char *src)
{
    while (*src)
        *dst++ = *src++;
}
```
- b) 

```
strcpy (char *dst,char *src)
{
    while(*dst++ = *src++ )
}
```
- c) 

```
strcpy (char *dst,char *src)
{
    while(*src)
    { *dst = *src;
      dst++; src++;
    }
}
```
- d) 

```
strcpy(char *dst, char *src)
{
    while(++dst = ++src);
}
```

ans:b

8. Consider the following program

```

main()
{
    int i=20,*j=&i;
    f1(j);
    *j+=10;
    f2(j);
    printf("%d and %d",i,*j);
}
f1(k)
int *k;
{
    *k +=15;
}
f2(x)
int *x;
{
    int m=*x,*n=&m;
    *n += 10;
}

```

The values printed by the program will be

- a) 20 and 55
- b) 20 and 45
- c) 45 and 45
- d) 45 and 55
- e) 35 and 35

9. what is printed when the following program is compiled and executed?

```
int
func (int x)
{
    if (x<=0)
return(1);
return func(x -1) +x;
}
main()
{
    printf("%d\n",func(5));
}
```

- a) 12
- b) 16
- c) 15
- d) 11

10. Consider the following of c code in two files which will be linked together and executed .

```
a.c:  int i;
main()
{
    i = 30;
    f1();
    printf("%d\n",i)
}
b.c:  static int f1()
{
    i+=10;
}
```

which of the following is true ?

- a) a.c will fail in compilation phase because f1() is not declared
  - b) b.c will fail in compilation because the variable i is not declared
  - c) will print 30
  - d) will print 40
  - e) a & b
- ans: e) a & b

11. Consider the following prg

```
void funca (int *k)
{
    *k += 20
}
void funcb (int *x)
{
    int m=*x,*n = &m;
    *n+=10;
}
main()
{
    int var = 25,*varp=&var;
    funca(varp);
    *varp += 10;
    funcb(varp);
    printf ("%d and %d\n",var,*varp);
}
```

The values printed when the above prg is compiled and executed are:

- a) 20 and 55
- b) 20 and 45
- c) 45 and 55
- d) 55 and 55

e) 35 and 35

ans: d

12. consider the following program:

```
# include
class x {
    public:
        int a;
        x();
};
x::x() { a=10; cout
class b:public x {
    public:
        b();
};
b::b() { a=20; cout
main ()
{ b temp;
}
what will be the output of this prg?
```

- a) 10
- b) 20
- c) 2010
- d) 1020

ans: b

1. HCL has two divisions a) technology division b) application division. if a student opts for a) then he has to give 2 papers 1) aptitude (25 questions) 2) technical(30 approx). if he opts for application field then he has to give only apti paper which is same as that of techni paper.
  2. after the written results are declared the technology students are given another test of 15 minutes in which they have to write a C program(reversing string, reversing singly/doubly link list(FAVOURITE))and then interview is taken.
  3. if you have good command in comp s then opt for technology paper.
  4. in apti(for tech people) if you do 8-10 out of 25 then it is on safe side.
- question not in order dont remember all question. if you have time practice BARRON's analytical ability. most q's from here.
- 1) BARRON section ANALYTICAL ABILITY page 396, practice excercises question 1-4(edition of my book 1998 check out). quest like this miss braun, mr white, miss green, mr parker etc.
  - 2) BARRON section ANALYTICAL ABILITY page 401, practice excercises question 37-39 (edition of my book 1998 check out). base ball team, pitchers-craig, hook.
- APTITUDE PAPER
- 1 The closing of the resturant by Mr.X on SEPT 1 was considered an unfinancial one, as the weather remained unusually clear and sunny for another one month. An author who criticizes the act of Mr. X would be proved wrong if the following was true??  
ANS choice a) the weather did not usually remained fine after SEPT 1.
  - 2 SUSAN works in a company who has restricted its employees from smoking cigerrates in the canteen. As susan is the employee of the company she does not smoke cigerrate in the canteen. Which of the following unused phrases strengthens the rules of the company??  
ANS the employees normally do not do the work for which the company has forbidden them to do.

- 3 A q's on family relation was given like How many sons X has, I P is the daughter of X ,II some cond., III some cond. ANS a) I ,II, III together are not sufficient.
- 4 A q's in which a name KAPIL is given he visits manoj's home.some condt. given. ANS b)
- 5 A,B,C,D are the 4 plays which are organised starting from tuesday.find the day on which C was played.in this 2 cond. will be given as , I....., II....., ANS both I and II
- 6 A quest on crypto graphy like  
A B C D  
E F G H  
-----  
. . . . . is A=, find the other values.  
practice these types of quest.
7. A question on race was given.hell lot of condt. finally they make a team for 4\*100 metres medaly.  
ANS E none of the above
8. Piggy backing is a technique for a) Flow control b) sequence c) Acknowledgement d) retransmission  
ans: c piggy backing
- 9.. The layer in the OST model handles terminal emulation  
a) session b) application c) presentation d) transport  
ans: b application
- 10 ans: a odd numbers of errors
11. In signed magnitude notation what is the minimum value that can be represented with 8 bits  
a) -128 b) -255 c) -127 d) 0 ANS a)
- 12 c) 20(no of address lines in 1MB of memory)
- 13 A 120(25 hz processor,what is the time taken by the instr which needs 3 clock cycles)
- 14 B synchronise the access(semaphores used for)
- 15 A system call(context switching is used in)
- 16 B the operating system(mapping of virtual to physical address)
- 17 A 177333(conversion of HEX "0xFEDB" in octal)
- 18 D used as a network layer protocall in network and windows(OLE) system
- 19 B has to be unique in the sub network(internet address)
20. There is an employer table with key feilds as employer no. data in every n'th row are needed for a simple following queries will get required results.  
a) select A employe no. from employe A , where exists from employe B where A employe no. >= B employe having (count(\*) mod n)=0  
  
b) select employe no. from employe A, employe B where A employe no. >= B employ no. grouply employe no. having (count(\*) mod n=0 )  
c) both a& b d)none of the above
- 21 . type duplicates of a row in a table customer with non uniform key feild customer no. you can see  
a) delete from costomer where customer no. exists ( select distinct customer no. from customer having count )  
b) delete customer a where customer no. in (select customer b where custermer no. equal to b cUSTOMOR no.) and a rowid > b rowid c) delete customer a where cUSTOMOR no. in ( select customer no. from customer a, customer b ) d) none of the above
22. which feature in ANSI C but not in JAVA.??ANS variable arguments.
23. preprocessor does not do one of the following??ANS type checking.
24. long int size a) 4 bytes b) 2 bytes c) compiler dependent d) 8 bytes  
ans: compiler dependent
25. x=2,y=6,z=6 x=y==z;  
printf("%d",x) ?ANS 1
26. class c : public A,publicB  
a) 2 members in class a,b can have member functions with same name.  
b) 2 members in class a,c can have member functions

with same name. c)both d)none(ANS)

27. What will be the out put of the following program

```

main()
{
char *p;
p=malloc(10);
free(p);
printf("%d",p);
}
ANS compilation error

```

28. a=(10,15), b=10,15 what are the values of a & b in ANSI C ANS 15,10

29 main()

```

{
int x=10,y=15,z=16;
x=y=z;
printf("%d",x);
}
ANS 0

```

30 f(n) f(x)

```

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

```

find the value of fn(5)? ANS 15.

31 struct {

```

int det;
struct prevoius;
struct new;
}
delete(struct node)
{
node-prev-next=node-next;
node-next-prev=node-prev;
if(node==head)node
}

```

one element will be given. ANS::it does not work when rp is the last element in the link list.

32A code will be given which searches a particular char in the string. ANS:: it always works.

33. main()

```

{
int var =25,varp;
varp=&var;
varp p=10;
fnc(varp);
printf("%d%d",var,varp);
}
ANS::55,55 (check this out)

```

34. #define VALUE 1+2

```

main()
{
printf("%d and %d\n",VALUE/VALUE,VALUE*3);
}
ANS:: 5,7

```

35What is the value assigned to the variable a if b is 7  
a=b>8?b<<2:b>4?b>>1:b; ANS::3

36.the value of the following expr (2^3)+(a^a) is a) 1 b)2 c) 3 d) insufficient data

37 which of the following is not basic data type ANS char\*

38. the declaration of the variable does not result in one of the following ANS allocatrion of the storage space for the variable.

39. in C parameters are passed by ANS:: value only.

40. 2 variables cannot have the same name if they are ANS:: in the same block.



e) RDBMS

Which of the following is not a natural member of the set

A) UNIX B) OS/2 C) PICK D) LAN E)

VMS

Which of the following is not a DBMS

ORACLE B) SYBASE C) PICK D) INFORMIX E) UNIFY LOTUS 1-2-3 is a Word processing S/w Case tool DBMS Laser printer None of the above

each problem consists of a question and two statements numbered (1) and (2), in which certain data are given, these are followed by five options, please tick: if statement (1) alone is sufficient, but statement (2) alone is not sufficient to answer the question asked. if statement (2) alone is sufficient, but statement (1) alone is not sufficient to answer the question asked. if both statement (1) and (2) together are sufficient to answer the question asked., but neither statement alone is sufficient. if each statement alone is sufficient to answer the questions asked. if statements (1) and (2) together are not sufficient to answer the question asked., and additional data specific to the problem are needed.

If a rope is cut into three pieces of unequal length, what is the length, what is the length of the shortest of these pieces of rope ? The combined length of the longer two pieces of rope is 12 metres The combined length of the shorter two pieces of rope is 11 metres

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

A certain company paid bonuses of Rs.125 to each of its executive employees and Rs.75 to each of its non executive e employees. If 100 of the employees were non-executive, how many were executives? The company has a total of 120 employees The total amount that the company paid in bonuses to its employees was Rs.10,000

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

What fraction of his salary did Mr. Johnson put into savings last week? Last week Mr. Johnson put Rs.17 into saving. Last week Mr. Johnson put 5% of his salary into savings.

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

Each M-type memory that will increase the base memory capacity of a certain computer by 3 megabytes. What is the base memory capacity, in megabytes, of the computer? 2 M-type memory units will increase the computer's base memory capacity by 300% 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)

What fractional part of the total surface area of cube C is red? Each of 3 faces of C is exactly 1/2 red Each of 3 faces of C is entirely white.

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

#### SECTION B

1. How many of the integers between 25 and 45 are even?  
A) 21 B) 20 C) 11 D) 10

E) 9

2. If taxi fares were Rs.1.00 for the first 1/5 mile and Rs.0.20 for each 1/5 miles thereafter, the taxi fare for a 3-mile ride was

A) Rs.1.56 B) Rs.2.40 C) Rs.3.00

- D) Rs.3.80                      E) Rs.4.20
3. A computer routine was developed to generate two numbers (X, Y) the first being a random number between 0 and 100 inclusive, and the second being less than or equal to the square root of the first. Each of the following pairs satisfies the routine EXCEPT  
 A) (99.10)                      B) (85.9)      C) (50.7)  
 D) (1.1)                          E) (1.0)
4. A warehouse had a square floor with area 10,000 sq. metres. A rectangular addition was built along one entire side of the warehouse that increased the floor by one-half as much as the original floor. How many metres did the addition extend beyond the original building?  
 A) 10                      B) 20                      C) 50                      D) 200  
 E) 500
5. A digital wristwatch was set accurately at 8.30 a.m. and then lost 2 seconds every 5 minutes. What time was indicated on the watch at 6.30 p.m. of the same day if the watch operated continuously that time?  
 A) 5:56                      B) 5:58                      C) 6.00  
 D) 6:23                      E) 6:20
6. A 5 litre jug contains 4 litres of a saltwater solution that is 15 percent salt. If 1.5 litres of the solution spills out of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution in the jug is salt?  
 A) .5%                                      B) 9.5%                                      C) 10.5%  
 D) 12%                                      E) 15%
- A plane travelled K miles in the first 96 minutes of flight time. If it completed the remaining 300 miles of the trip in 1 minute, what was its average speed in miles per hour for the entire trip?

SECTION C

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<=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)
}
```