

## Sample Test Paper

### 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 aboveAns: (a)
2. In OST, terminal emulation is done in
  - (a) sessions layer
  - (b) application layer
  - (c) presentation layer
  - (d) transport layerAns: (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) 24Ans. (b)
5. Semaphore is used for
  - (a) synchronization
  - (b) dead-lock avoidance
  - (c) box
  - (d) noneAns. (a)
6. Which holds true for the following statement `class c: public A, public B`
  - a) 2 members in class A, B should not have same name
  - b) 2 members in class A, C should not have same name
  - c) both
  - d) noneAns. (a)
7. OLE is used in
  - a) inter connection in Unix
  - b) interconnection in WINDOWS
  - c) interconnection in WINDOWS NT
8. Convert a given HEX number to OCTAL

9. Macros and function are related in what aspect?  
(a) recursion  
(b) varying no of arguments  
(c) hypo checking  
(d) type declaration
10. Perricone. does not do which one of the following  
(a) macro  
(b) conditional compilation  
(c) in type checking  
(d) including load file  
Ans. (c)
11. Piggy backing is a technique for  
a) Flow control  
b) Sequence  
c) Acknowledgement  
d) retransmission  
Ans. (c)
12. In signed magnitude notation what is the minimum value that can be represented with 8 bits  
(a) -128  
(b) -255  
(c) -127  
(d) 0
13. There is an employer table with key fields as employer number data in every row are needed for a simple following queries will get required results.  
(a) select An employee number from employee A , where exists from employee B where An 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 employ number group by employee number having(count(\*) mod n=0 )  
(c) both (a) & (b)  
(d) none of the above
14. 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 rowed  
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 {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()
{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 funtion `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 fution `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 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