

ANNUAL EXAM - Class XI

Computer Science

M.Marks – 70

Time –3 Hour

Q1. Explain and differentiate the following (Attempt any **four**) (8)

- i) Global and Local variable
- ii) Function Call by Value and by Reference
- iii) Continue statement and Break statement
- iv) gets() and puts()
- v) if and switch case statements.

Q 2 Give the use and name of header files to which following

inbuilt functions belong to (with examples) : (Any four) (1 ½ X 4 = 6)

- 1) exit() 2) strcmp() 3) ceil () 4) fabs() 5) isalnum()

Q3. Write the outputs of the following programs : (2 X 3 =6)

i) `int sum(int arr[], int size) ;`

`void main()`

`{ int val[]={ 1,3,5,7,9,11,13,15,17,19};`

```
int s1=0,s2=0;
```

```
s1=sum(val,4);
```

```
s2=sum(val,2);
```

```
cout<<s1<<" "<<s2;
```

```
}
```

```
int sum(int arr[], int size)
```

```
{ for(int i=0,s=0;i<size;++i)
```

```
    s+=arr[i];
```

```
    return s; }
```

```
ii) void sfn( int last)
```

```
    { int s=0;
```

```
      static int s1=0;
```

```
      for(int j=last ;j>0;j--)
```

```
        s=s+j;
```

```
        s1=s1+s;
```

```
        cout<<s<<" "<<s1<<endl;
```

```
    }
```

```
void main( )
```

```
{ for(int i=1; i<4; i++)
```

```
    sfn(i); }
```

```
iii) int p= 6;
```

```
void change( int &a, int &b, int c)
```

```
{ p=a%b;

c=c+a;

a=a+8;

b = p+a ;

cout<<p<<a<<b<<c<<endl;

}

void main( )

{ int p=3,q=7;

change(&p, p, q);

cout<<p<< p << q<<'\n'; }
```

Q4. Find syntax errors if any in following program(Assuming all header files are present)

(2 X 2 =4)

```
a) void fact( int p)

{ long int f=1;

for( j=1 ,j<=p , j++)

f=f*j; }

void main( )

{ int n;

cin>>n;

cout<< fact(n);

cout<<endl<<p; }
```

b) void main()

```
{ int n1,n2;  
  
  int sub(int m1,int m2)  
  
  int res;  
  
  cin>>n1; cin>>n2;  
  
  res=sub(n1);  
  
  cout<<res<<i; }
```

```
float sub(int m1, int m2);
```

```
{ for(int i=1;i<5;i++)  
  
  m1++;  
  
  return (m1-m2); }
```

Q5. Write function definitions for the following(**Any four**) : (4 X 4 =16)

a) A function **average()** to print the average of all the numbers divisible by 5 of an integer array X[20].

b) A function **Sum()** which accepts a value n and returns the sum of the following series :

1 + 1 + 2 + 3 + 5 + 8 + ----- n terms.

d) Returns the number of spaces in a string received by the function **count ()**

e) A function **Area()** to return total area to the main after accepting length and breadth from the main, input by the user for a rectangle.

f) A function **locate()** which finds and prints the location of a given character in a string.

Q6. Declare a structure : (5)

employee : code,name,address,mobile number, basic salary

Write a program to calculate Net Salary of 10 employees if

Net Salary= basic salary + da + hra

Where da=65% of basic salary, hra=15% of basic salary

Q7. Evaluate the following and write the result : (4)

a) $(c-b \geq d) \ \&\& \ ((b+d) \geq (a+c)) \ || \ (((a+b) > c) \ \&\& \ ((b-c) < d))$

(if a=5, b=1, c=3, d=1)

b) (if x=7, y=3, z=5)

`++x; --y;`

`z=z-y;`

`cout<< ++y << --z << ++z << z++ << --x;`

c) `cout<< ++a << a++ << -b << c++ << ++d << c- - << -d << --b;`

(if a=2, b=6, c=3, d=8)

d) `b = ++ c + 4*c + c++ ;` (if c = 6 initially)

Q 8. Write a program with a function **mirror()** that accepts a string and prints the mirror image of the String input in the main() by the user.

e.g if the string is "What is this?", then the function call will print --

"?siht si tahW" (4)

Q9. Write a program to input an integer array X[10]. Create another array Y[10]

containing first the even numbers and then the odd numbers from array X.

(4)

Q10. Write a program to accept sid , sname and sales of 10 salesmen for two

months. Display the complete data in descending order of total sales of each

salesman. (5)

Q11. Convert the following for loop to **while** and **do-while** loops respectively : (3)

```
for( int k=3 ; k<=12 ; k++)
```

```
{ if(k%2==0)
```

```
    cout<<k*k*k;
```

```
    else
```

```
        cout<< k;
```

```
cout<<endl;
```

```
}
```

Q12. Write a program to input two integer arrays Q[3][3] and P[3][3] and do the

following: (5)

- a) Concatenate array P to array Q and print the concatenated array in a tabular format.
- b) Print the diagonals of Q in a proper format.