C++ TEST 1

Time: 45 mins
Marks: 95 !!

Instructions:

1) Assume that all the header files necessary for the functions are included.

2) All the questions are typed "correctly", so do not change the question.

3) "IF" you want to represent "infinite" numbers in an output just put three dots after some numbers
   For eg:-
   1234...

Q1. Consider the below program [5+3+5+2+5]

```
void main()
{  randomize();
   int i;
   i=random(5||6);   //Statement 1
   cout<<i;
}
```

(i) The number of possible outputs for the program is _____

(ii) If Statement 1 is changed this way:-

i=random(2||3);

will the number of possible outputs change? _____(Yes/No)
If yes, then what is the number of possible outputs? _____

(iii) Now lets say statement 1 is changed this way:-

i=random(13&&20);

will there be an error? _____(Yes/No)
If there is no error, the number of possible outputs is_____

Q2. Consider the below program [10+3+3+10+10+3]

```
int k(int a,int b)
{ return (a+b);
}

 void karu(int a,int b)
 { cout<<a<<"\n"<<b;
 }

 void main()
 { int a=10;
   karu(k(a++,++a),a);     //statement 1
 }
```

(i) The Output of the code is:- [10]

(ii) The parameters of karu() are executed from right to left _____(True/False) [3]

(iii) The parameters of k() are executed from left to right _____(True/False) [3]

(iv) Now let's say statement 1 is changed this way:-

karu(k(a=3,++a),a);

What will be the output? [10]

(v) Now if statement 1 is changed this way:-

karu(k(a==3,a++),a);

What will be the output? [10]

(vi) In (v) the parameters of karu() will be executed from left to right _____(True/False) [3]

Q3. Consider the below program:- [2+2+3+10+3+10+3+3]

```
void main()
{
  for(static int i=1;i<(10,5,20);i++)     // Loop 1
  {
     for(static int j=1;j<(15,40,10);j++)      // Loop 2
     {
         for(static int k=1;k<(50,30,5);k++)   //Loop 3
         {   cout<<k<<" ";
         }

     }

  }
}
```

When the body of a loop is executed finite times, it is called a finite loop, if it is executed infinite times, then it is called an infinite loop.

(i) Loop 1 is an/a _____(Infinite/Finite) loop. [2]

(ii) Loop 2 is an/a _____(Infinite/Finite) loop. [2]

(iii) Loop 3 is an/a _____(Infinite/Finite) loop. [3]

(iv) What is the output of the program? [10]

(v) If Loop 3 is changed like this :-

```
for(static int k=1;(k+=5,k*=10,k-=50,k/=50),k<5;k++)
{ cout<<k<<" ";
}
```

(a) Loop 3 is an/a _____(Infinite/Finite) loop. [3]

(b) Now what is the output of the program? [10]

(c) The value of 'k' is different each time, when the body of Loop 3 is executed _____(True/False) [3]

(d) The value of 'k' is 0 sometimes _____(True/False) [3]

(e) The value of 'k' is always less than 2 _____ [3]