Std. 11 Time : 1 hr.
03-12-2015 Second Unit Test in COMPUTER SCIENCE M. Marks: 20

1. What will be the possible output from the following options i to iv ? Justify the answer. [2]
(assuming the header files are included)

```
const int LIMIT= -50;
 void main( )
{   randomize( );
    int Points=104 ;
        for(int i=100 ; i<Points ; i++)
        {     P=  i + random (LIMIT);
              cout<<P<<"#";
             LIMIT+=5;
        }
 }
```

i) 50#59#60#69#
ii) 59#69#101#70#
iii) 100#101#64#60#
iv) 79#56#70#78#

2. Write the output if the input is "**StRing!5;Out@put!**" :- (assuming the necessary environment is written for the following code) [2]

```
char Line;
for( i=1; i<=16 ; i++)
{    Line=getch();
                if( islower(Line) && Line!='u' )
                    Line=toupper(Line);
                else if(isupper(Line))
                    Line = tolower(Line);
                else if (isFunct(Line))
                    Line = '#' ;
          cout<< Line;
        }
```

3. Differentiate between the following. [4]
   i) cout<< and puts()
   ii) getch() and getche()

4. Name the header files for the following functions [2]
   i) setw() ii) gets() iii) randomize() iv) fabs()

5. Write a program that reads a character from the keyboard till the user press 'Q' to terminate (while inputting character should not be printed on the screen). Implement the following on the inputted character. [3]
   a) If the character is an alphabet or a digit, print the next successive character.
   *Example* : if input is 'D' then 'E' is printed on screen
   b) If the character is a special symbol, print \t (tab) character.

c) If the character is a white space character, count them and print total white spaces entered.

6. Write program to print the following series. Calculate and print the sum of series also. (using nested for loop) [3]

$$1 + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \frac{x^5}{5!} + \frac{x^6}{6!} + \cdots \text{ ... ... ... . up to N terms}$$

7. Write a program that reads a string password and prints "Welcome to C++" if the correct password is entered otherwise print "Try Again". User should be given only five chances to enter password, if in all the five chances user enters wrong password then "Account Blocked !!!! you failed in all the five chances" should be printed on screen. [2]

8. Find errors and give valid reasons for the errors :- (assuming the necessary environment is written for the following code) [2]

```
for( int i=1 ; i<=4 ; i++ , ch++ )
{    char ch ='A' ;
        for( int j=1 ; j<= i  ; j=+2 , ch++)
        {   int d = i+10 ;
                cout << ch<< " * " << d ;
        }
cout << "\n" << d << ch << j ;
}
cout << "\n" <<  i << j ;
```

-x-x-x-x-x-