FIRST TERM EXAMINATION, 2011-12
COMPUTER SCIENCE (083)

CLASS-XI (Science)  M.M. 70

1. (1)
   a. Which loop is an exit control loop in C++?

   b. Define function prototype.

   c. What is difference between / and % operators in C++?

   d. What is the difference between a keyword and an identifier?

   e. Distinguish between a unary, binary and a ternary operator. Give example of C++
      operators for each one of them.

   f. Define inheritance and polymorphism.

   g. Differentiate between call by value and call by reference with example.

   h. What is a variable scope? What is life-time of a variable?

   i. Differentiate between actual and formal parameters with example.

2. (2)
   a. Name the header files required for successful execution of a program that uses the
      following components:
      i. endl
      ii. setw() iii. getc() iv. sqrt() (2)

   b. Re-write the following snippet after correcting the syntax error and also underline the
      corrected code.

      i) int main()
         {
          cout<<"Enter the two numbers;";
          cin>>num>>auto;
          float area= length*breadth;
          cout<<"Area is<<area
         }

      ii) void large ( int a, int & b);
          int main ()
          {
            large(5,7);
           }
          void large ( int & a, int & b)
          {
            if(a>b) a=-1;
            else b=-1;
          }

      iii) float interest ( float prn, int time=2, float rate=0.10);
          int main()
          {
            cout<<"Interest(6100,1)<="\n; cout<<"Interest(5000,2)<="\n; cout<<"Interest(5000,3,0.12)<="\n; cout<<"Interest(5000)<="\n;
            }
            float interest(float prn, int time, float rate)
            { return prn*time*rate;)

P.T.O.
c. What will be the output of following code snippet:
```cpp
void display(char nm[])
{
    char ch=nm[0];
    for(int i=0;i<strlen(nm);++i)
    {
        nm[i]=nm[i+1];
    }
    nm[i]=ch;
    cout<<nm;
}
void main()
{
    char title[20]="COMPUTER";
    display(title);
    cout<<title;
}
```

3. e. Predict the output of the following codes: (Make sure the Syntax is correct)
   i) if(1)
      cout<<" Be careful";
      cout<<"You might commit a mistake";
   ii) if(15)
       cout<<" How many times";
       else
       cout<<" No more please";
       cout<<" O.K";
   iii) if(0)
       cout<<"Third time again"
       cout<<" Last chance"
       else
       cout<<" Very good";

3. a. Write alternate code for the following codes:
   i) Using conditional operator
      if(a = 0)
         cout<<" Zero";
      if(a = 1)
         cout<<" One";
      if(a = 2)
         cout<<" Two";
   ii) Using while loop
       constant SZ=25;
       for(int i=0,sum=0;i<SZ;i++)
       sum+=i;
       cout<< sum;
   iii) Using switch construct:
       char wish;
       if( wish== 'a')
          cout<< " YOU WILL GET 40 OUT 40";
       else if( wish== 'b')
          cout<< " MY FRIEND WILL GET 40 OUT 40";
       else if( wish== 'c')
          cout<< " TEACHER WILL NOT GIVE 40 OUT OF 40";
else
    cout<<"NO ONE WILL GET 40 OUT OF 40";

b. What is dangling else problem? How is it overridden? Give example to support your answer.

c. What will happen if you forget to put a break statement after each case statement in a switch block? What is the name given to this problem?

d. What will be the character size of the following constants:
    ‘a’, "a", "sachin's bat", 'n'

e. Evaluate x=++y +2*y if y=6

f. Compare the two statements:
    char code= 75;
    char code='k';

g. Determine the order of evaluation of the following expression:
    !(a+3&&++4||(x/y==2))

4.

a. Write a program in c++ to convert temperature in Celsius to Fahrenheit. Note:
   Fahrenheit= (5/9*celsius+32)

b. Write a program to print the reverse and sum of all the digits of a number entered through keyboard.

c. Write a function definition that takes an int argument and doubles it. The function does not return a value. (No need to write main function)

d. Write a program using function calc() that takes two integers and one character argument and returns the result of the corresponding arithmetic operation depicted by the character passed on the two variables. (FOUR FUNCTION CALCULATOR)

e. Write a program using function to swap the content of two variables without using a third variable. (No need to write main function)

f. Write a function that accept a number and print it in words.
   Ex: N=7301 output should: Seven Three Zero One

g. Write a function to compute length of string.

h. Write a program to print the largest element of an array.