# Lab 5

## Introduction to C Programming

Marks: 8

**Question 01:**

Write a C program to print hollow diamond star pattern

**Question 02:**

Write a program which generates quadratic equation and store the answer in x1 and x2.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

**Question 03:**

Write a program in c language and take the 2 inputs, 1st one is integer base for example 9876 and 2nd one is float base 987.6543. Outcome as below.

4-digit integer right justified to 6 columns: 9876

4-digit integer right justified to 3 columns: 9876

Floating point number rounded to 2 digits: 987.65

Floating point number rounded to 0 digits: 988

Floating point number in exponential form: 9.876543e+02

**Question 04:**

Areeba has a habit of collecting different country's coins. Areeba has 7 Pakistani coins, 4 UK coins, 3 Indians and 3 Australian coins. Based on the input, identify how many international coins she has.

**Question 05:**

Write a program which takes two integers and interchange them without using additional variable.

**Question 06:**

Write a program which takes mass in kilograms (kg.) from user and display corresponding mass in pound (lb.) showing result in 3 decimal precision.

**Question 07:**

Write a program which separates ones, tens, hundreds and thousands from a four-digit user input. Use 0000 as default value, given input should replace 0000.e.g.

Before, Enter a four-digit number: 0000
After, Enter a four-digit number: 1234

**Question 08:**

Write down the following programs, display the output, if there is an error in program then correct it.

a. void main()
   { int a=b=c=10; a=b=c=50; printf("\n %d %d %d",a,b,c); }
b. Void main ( ) { Double x=28; Int r; R= x%5; Printf ("\n r=%d", r); }
c. Void main ( ) { Int I ; I=0x10+ 010+10; Printf ("\nx=%x", i); }
d. Void main ( )
   { Printf ("\n ABC\b\b\bInfo World"); }