

**POST GRADUATE DIPLOMA IN LIBRARY
AUTOMATION AND NETWORKING (PGDLAN)**

Term-End Practical Examination

June, 2010

00894

MLIL-007 : PROGRAMMING

Time Allowed : 2 Hours

Maximum Marks : 50

(Practical Work : 40

Viva Voce : 10)

(Weightage : 40%)

General Instructions :

- (i) *This Question Paper comprises three parts. Attempt **any one** part. Answer all the questions from attempted part.*
 - (ii) *Show the output to your examiner.*
 - (iii) *Save your output in your system which will be checked by the examiner.*
 - (iv) *Printout of the answers wherever required should be taken in a sheet duly signed by RD with his/her stamp. Write your Roll No., Study Centre and date of examination on these sheets.*
 - (v) *Candidates are not permitted to use any manual/handbook in carrying out the practical.*
-

PART-A : C++

1. Write a program in C++ to implement a class "Publication" which contains the data members "title" and "Price" and member-functions "getdata" and "putdata". Create another class with name "sales" which contains the data members "S1", "S2", "S3" to store the sales of last three months and with member-function "getdata" and "putdata". Derive a class called "book" for "publication" and "sales" with a data member "pages" and member functions "getdata" and "putdata". Use the member functions "getdata" and "putdata" of classes. "Publication" and "sales" in the member function of respective "getdata", "putdata" of "book" to access the details. Write a suitable main () function to demonstrate the above parent class and the derived classes. 20

 2. Using the OOP's features of function overloading in C++, write a program to find the perimeter of a square and a rectangle. 20
Hint : Perimeter of a square = $4 \times \text{side}$
Perimeter of a rectangle = $2 (\text{length} + \text{breadth})$
-

PART-B : JAVA

1. Write a program in Java to find the greatest common divisor of two input integers. 20
 2. Write a program in Java that accepts two strings S1 and S2 as input and prints the starting location of right most occurrence of S2 in S1 20
-

PART C : Visual Basic

1. Write a program that will calculate and display the real roots of the quadratic equation, $ax^2 + bx + c = 0$. User should input any value of a, b and c and get values of x as an output using the formula. **20**

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

Assume, $b^2 > 4ac$, so that calculated roots will be real.

2. Create a VB program to calculate the percentage and total marks in each course obtained by students. Also, generate a grade card of a student as shown below : **20**

Course-Code	Course Name	Maximum Marks	Marks obtained	Minimum Marks	Percentage
MCS-011					
MCS-012					
MCS-013					
MCS-014					
MCS-015					
MCS-016					
MCS-017					
Total					

Create one or more array of text boxes and appropriate labels to accept the marks gained by the student.

Note : Make necessary assumptions, wherever required.