

00199

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

Term-End Examination

June, 2011

MLI-007 : PROGRAMMING (C++)

Time : 2 hours

Maximum Marks : 50

(Weightage : 40)

Note : (i) *There are three parts in this Question Paper.*

Part A : C++

Part B : Java

Part C : Visual Basic

(ii) *Candidates are advised to attempt only the part opted by them.*

(iii) *Mention clearly the part attempted before answering.*

(iv) *All parts carry equal marks.*

(v) *Answer all questions. All questions carry equal marks. Illustrate your answers with suitable examples and diagrams, wherever necessary. Write the relevant question number before writing the answer.*

PART-A : C++

- 1.1** Explain protected and private members of a class. Define a class which consists of both of them.

OR

- 1.2** Explain the concept of multiple inheritance. Illustrate with an example of C++ program.

- 2.1** "Algorithm design is the key factor in problem solving". Justify the statement and also explain different problem solving strategies.

OR

- 2.2** Explain the concept of virtual function with the help of an example program in C++.

- 3.1** Differentiate between function overloading and operator overloading. Also, give an example of each.

OR

- 3.2** Explain 'dynamic binding', with the help of an example. Also, give its advantages and disadvantages.

4.1 Write a program in C++ to implement a class named "sq matrix" to find the sum of two square matrix of real numbers.

OR

4.2 Write a C++ program to split a given input array string of size 30 characters, such that all characters in odd positions of the array will be in a new array named "odd" and characters in the even positions will be in another array called "even".

5.0 Write short notes (about 250 words each) on *any two* of the following :

- (a) Destructor
- (b) Modular programming
- (c) Abstract class
- (d) Inheritance.

PART-B : Java

- 1.1** List and explain the various classifications of systems.

OR

- 1.2** In a tabular form, furnish the key questions and their corresponding results in each and every phase / stage of SDLC.

- 2.1** Write a program in JAVA to explain how arrays of integers are created. Also, find whether a given element is in the input array or not.

OR

- 2.2** What is inheritance ? List the various types of inheritances those are supported by JAVA. Also write an example program to illustrate the concept of inheritance.

- 3.1** Create a class called EMPLOYEE. Also write corresponding meaningful data members and member functions to output the employee's name, designation and basic salary if the employee's _ID is given.

OR

- 3.2** Define 'exception'. How are these created and implemented in JAVA ? Illustrate with the help of an example code.

- 4.1** Explain the mechanisms for declaring and importing the packages in JAVA.

OR

- 4.2 Write an algorithm, to reverse and find the sum of a 5 - digit number. Also, draw the corresponding flowchart.
- 5.0 Write short notes (about 250 words each) on *any two* of the following :
- (a) Garbage collection used by JAVA
 - (b) Polymorphism in JAVA
 - (c) Primitive datatypes in JAVA
 - (d) Constructors

PART-C : VISUAL BASIC

1.1 What is OLE ? How can you create OLE object at design time ?

OR

1.2 For each of the category of the function given below, give atleast three functions, their uses in the programming and an example for each :

- (a) String functions
- (b) Financial functions.

2.1 Explain the following terms used in the object linking and embedding :

- (a) Object
- (b) Linked object
- (c) Embedded object
- (d) Container application
- (e) Source application

OR

2.2 Write the step-by-step procedure to change the design of the existing table. Illustrate this with the help of an example.

3.1 Explain the functionalities of the following controls, when placed on the VB - form :

- (a) Label
- (b) Text box
- (c) Option button

- (d) Db List
- (e) Db Combo
- (f) Db Grid
- (g) Frame
- (h) Shape
- (i) Command button
- (j) Check box

OR

3.2 List the arithmetic, logical and relational operators along with their purpose of use in the programming.

4.1 Write the syntax for the following control structures along with an example for each :

- (a) For Next
- (b) Select case

OR

4.2 Write an event procedure to reverse a 5 - digit number and display.

5.0 Write short notes (about **250 words** each) on *any two* of the following .

- (a) Event procedure
- (b) Control Array
- (c) MDI form
- (d) Debug windows
- (e) Data manager.