

POST GRADUATE DIPLOMA IN  
LIBRARY AUTOMATION AND  
NETWORKING (PGDLAN)

Term-End Examination

June, 2013

MLI-007 : PROGRAMMING

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 What is encapsulation ? What are its advantages ? How can encapsulation be enforced in C++ ? Give an example code segment.

#### **OR**

- 1.2 Explain how, working of a member function different from friend function and a non-member function ?

- 2.1 What is inheritance in C++ ? Discuss the various ways of inheritance of a class. Give an example for each.

#### **OR**

- 2.2 Explain the constraints on GOTO statement. Give an example demonstrating the necessity of using a GOTO Statement.

- 3.1 What are generic class ? Why are they useful ? Explain with an example how these are implemented in C++.

#### **OR**

- 3.2 Draw a flow chart and write an algorithm that accepts a string as input and calculate its length.

4.1 Write a program in C++ to implement a class named "Publication" that stores the book details (like title, price, year, author, publisher, etc) to search the books by the users.

**Note :** Make necessary assumptions, if necessary.

**OR**

4.2 Write a program in C++ to implement a class named "Banking" that stores the users details (like name, account number, account type, balance, etc) to perform the functions Money\_Deposit and Money\_Withdrawal by the users.

**Note :** Make necessary assumptions, if necessary.

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

- (a) Virtual function
- (b) Fourth Generation Languages
- (c) Operator Overloading
- (d) Exception Handling

## **PART - B**

### **(Java)**

- 1.1 Write atleast five advantages of programming using Java.

**OR**

- 1.2 Discuss various levels of access protection available in Java.

- 2.1 Explain the advantages and limitations of Interfaces. Also, write how these can be created and implemented.

**OR**

- 2.2 Explain the use of a 'static variable' and a 'static method' with the help of an example for each.

- 3.1 Explain function overloading with the help of an example code segment.

**OR**

- 3.2 What is the difference between 'type casting' and 'type conversion' ? How is type conversion and type casting implemented in Java ?

- 4.1 Write a program in Java to find the highest common factor of two numbers.

**OR**

4.2 Write a program in Java to compute the area of a rectangle, triangle and square using the concept of polymorphism.

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

- (a) Try... catch statement
- (b) Packages in JAVA
- (c) Constructors and Destructors
- (d) Object Oriented Programming

**PART- C**  
**(Visual Basic)**

**1.1** Why Visual Basic is known as Event Driven language ? Explain the different object oriented features of Visual Basic.

**OR**

**1.2** What is meant by control array ? Describe the steps to create a control array.

**2.1** Differentiate between DO..... UNTIL and DO..... WHILE loops using an example for each.

**OR**

**2.2** Explain the use and associated events (atleast *two*) for the following controls :

- |               |              |
|---------------|--------------|
| (a) Label     | (b) List Box |
| (c) Check Box | (d) Image    |

**3.1** Explain different Date and Time functions available in VB, along with an example for each.

**OR**

**3.2** What is the purpose of 'Flex Grid Control' ? Explain the following properties in context to Flex Grid Control :

- (a) Col Position
- (b) Row Height
- (c) Clip

4.1 Write an event procedure that accepts a string and print the reverse of it.

**OR**

4.2 Write an event procedure that accepts a lower case string and displays it in upper case.

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

- (a) Graphical User Interface
  - (b) MDI Form
  - (c) OLE (object linking and embedding)
  - (d) Indexes
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