

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

Term-End Examination

December, 2015

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.*
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PART A

C++

- 1.1** What are the various generations of languages ? How are the third generation languages different from fourth generation languages ? Write the names of any two third generation languages.

OR

- 1.2** Define overloading in C++. Explain operator overloading with an example program in C++.
- 2.1** Define Inheritance feature of OOPs. Discuss the various ways of inheritance of a class in C++.

OR

- 2.2** Write a program in C++ that will accept a string as input and print "PALINDROME", if the string is a palindrome, else print "WRONG INPUT".
- 3.1** Create a class named CON. Write a method in this class to concatenate two strings.

OR

- 3.2** How can function templates be used in C++ ? Give an example of a function template and explain it.

4.1 What are virtual functions in C++ ? Show the significance of virtual functions using an example program in C++.

OR

4.2 Write a program in C++ that accepts the enrolment number of a student and prints the student's marks and percentage (total). Make and state suitable assumptions.

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

- (a) Abstract Data Type
- (b) Destructor
- (c) Macros
- (d) Polymorphism

PART B

JAVA

- 1.1 Differentiate between 'Applets' and 'Applications' in Java with an example program for each.

OR

- 1.2 Give any five differences between overloading and overriding.
- 2.1 What is a static method ? Why can't a static method use 'this' ? Explain with the help of an example.

OR

- 2.2 Define system analysis. Explain different steps involved in system analysis.
- 3.1 Write a Java program to find the factorial of a given number. Also draw its flow chart.

OR

- 3.2 Create a user defined exception that is thrown when an input number *is not a valid mobile number*.

Note : Assume a valid mobile number is any number that starts with 9, 8 or 7 and is of 10 digits.

4.1 Define interfaces in Java. Explain their advantages and limitations.

OR

4.2 Explain the procedure for declaring and initialising the arrays, using an example.

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

- (a) Constructor
- (b) Polymorphism
- (c) File Handling
- (d) Multi-threading

PART C
VISUAL BASIC

1.1 What is the use of Data Control ? How is this used ? Explain with an example code segment using VB.

OR

1.2 Write different applications of OLE with examples.

2.1 What is meant by Control Array ? Write the steps to create a Control Array.

OR

2.2 Write an event procedure to accept three given numbers and find the largest among these numbers.

3.1 What is the significance of index in tables ? Write the steps of creating an index from the table editor dialog box.

OR

3.2 List the logical and relational operators in VB. Write their purposes and syntax in VB programming.

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

- (a) While Wend
- (b) Do Loop While

OR

4.2 Explain timer control. Also give an example of its usage in the user interface design.

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

- (a) Active-X Control
- (b) Data Manager
- (c) Image Control and Label Control
- (d) MDI Form