

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

Term-End Examination

December, 2016 00040

MLI-007 : PROGRAMMING

Time : 2 hours

Maximum Marks : 50

(Weightage : 40%)

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- 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 Explain the role of a Systems Analyst. Also, mention the skills that (s)/he should possess.

OR

1.2 Describe the following problem-solving strategies with the help of an example for each :

- (a) Divide and conquer
- (b) Dynamic Programming
- (c) Back tracking

2.1 Write an algorithm and draw a corresponding flow chart to find the largest number among the 3 numbers given as input.

OR

2.2 With the help of an example explain the scope Resolution Operation in C++. Also write a C++ Program to show how scope resolution operator is used; in case of method function implementation.

3.1 With the help of a simple C++ Program, illustrate the concept of single inheritance.

OR

3.2 Write an example of C++ Program of your choice to demonstrate "Operator Overloading".

4.1 List and explain any two looping constructs in C++. Also, write a simple program-segment for each.

OR

4.2 With the help of an example for each, explain the following statements :

- (a) If...else statement
- (b) Switch statement

5. Write short notes (about 250 words) on any two of the following :
- (a) Templates
 - (b) Nested classes
 - (c) Increment and decrement operators
 - (d) Inline Function

PART - B

(JAVA)

- 1.1 Explain the object oriented programming features of JAVA.

OR

- 1.2 Define Systems Analysis ? Explain the major tasks of Systems Analysis phase of SDLC.

- 2.1 Write a program in JAVA to perform a/b , where "a" and "b" are integers. Also, this program should verify and handle the "divide by zero" exception.

OR

- 2.2 Write an algorithm and draw a corresponding flow chart to check whether a given input is a positive number, zero or a negative number.

- 3.1 Define an Interface. Also, write a program in JAVA to illustrate it.

OR

- 3.2 What is the difference between a static method and a public method ? Write a simple program in JAVA to display "This is University's Library".

4.1 List and describe various primary data types in JAVA. Also, write a valid example statement for each of the data type.

OR

4.2 Create an object for a class University and write a method student_profile () that will accept the Enrolment number as input and displays the student's details like Name, Programme, Programme Code, Study Centre, Regional Centre etc.

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

- (a) Package
- (b) Static Methods
- (c) Overriding
- (d) Garbage Collection in JAVA Programming

PART - C

(Visual Basic)

1.1 What are Rapid Application Development (RAD) tools ? Justify Visual Basic (VB) as a RAD tool. Also, discuss the features of VB.

OR

1.2 Write the syntax for the following VB constructs and also give a suitable example for each and explain :

- (a) For statement
- (b) Select ... Case statement

2.1 Define a variable in VB. What are the conventions to be followed while naming a variable in VB ?

OR

2.2 Write an event procedure to generate a simple grade card for PGDLAN Programme. Make suitable assumptions.

3.1 What is an Interface and explain the features of Multiple document Interface of VB ?

OR

3.2 With reference to the use of the following controls on the form, explain :

- (a) Timer control
- (b) Grid control
- (c) Frame control
- (d) Data control
- (e) Command Button

4.1 What is meant by a Control Array ? How to create it ?

OR

4.2 Explain the following functions of VB with an example for each :

- (a) UCase
- (b) CDb1
- (c) DDB
- (d) Str
- (e) Val

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

- (a) Debugging and Error handling in VB
- (b) Indexes and their creation
- (c) OLE
- (d) File extension names for various VB files