POST GRADUATE DIPLOMA IN LIBRARY AUTOMATION AND NETWORKING (PGDLAN)

Term-End Examination

December, 2011

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 Explain the advantages/disadvantages of object oriented programming over procedural programming.

OR

1.2 What is data abstraction ? How is it implemented in C++ ?

2.1 Explain the following statements with appropriate examples :

(a) Break

(b) Continue

OR

2.2 Give an example each for protected member and private member of a class. Explain the differences between them in C++.

3.1 What is a virtual function ? What are it's advantages ? Give an example of a virtual function.

OR

3.2 What are inline functions ? How does inline functions differ from member functions ?

4.1 Is it possible to overload a construction ? Explain with an example.

OR

4.2 What are the differences between multiple and multilevel inheritance ? How are they implemented in C++ ?

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

   (a) *This* Pointer

   (b) Templates

   (c) Exception handling

   (d) Scope resolution operator

PART-B : Java

1.1 Write an algorithm that accepts a number that is an integer and a list of 10 integers as input. The algorithm should search the list for that number and print the position of the number as output. Also, draw a flowchart for the above problem.

OR

1.2 What are the differences between an algorithm and a program. Explain with an example.

2.1 What is a Java Virtual Machine ? What are its advantages ?

OR

2.2 Write and explain the syntax of the following control structures in Java with an example for each :

(a) *if*

(b) *if/else*

(c) *while*

3.1 What is the process of creating your own library in Java ? Mention the use of following libraries in programming :

(a) Java.util

(b) Java.io

OR

3.2 Write a program in Java that accepts an integer as input and computer its factorial.

4.1 Explain polymorphism in JAVA with a suitable example.

OR

4.2 What is a derived class in Java ? Give an example.

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

(a) *String* class

(b) Destructor

(c) Multi threading

(d) Package

PART-C : VISUAL BASIC

1.1 Explain the process of debugging a program in Visual Basic.

OR

1.2 List various arithmetic operators in Visual Basic and explain corresponding operations with a suitable example.

2.1 List and explain any five string functions in Visual Basic.

OR

2.2 List and explain various project files in Visual Basic.

3.1 What is a custom control ? How are they loaded ?

OR

3.2 Draw on event procedure to reverse on input string. Draw the layout of the user interface. Make necessary assumptions.

4.1 What are different ways in which a control array can be created ?

OR

4.2 What is a data manager ? Explain how to use it.

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

(a) Data - aware controls.

(b) Object linking and embedding

(c) Active - X controls .

(d) Financial functions in Visual Basic.

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