MLI-007

POST GRADUATE DIPLOMA IN LIBRARY AUTOMATION AND NETWORKING (PGDLAN)

Term-End Examination

December, 2022

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. Define a "system" in the context of an organisation. Explain how systems are classified.

OR

What is an algorithm ? Explain the main characteristics of an efficient algorithm.

2. What is modular programming ? How is it different from object oriented programming ? List advantages of object oriented programming.

OR

What is polymorphism ? Explain implementation of polymorphism with help of a C++ program.

3. What are member functions ? Differentiate between private and public member functions in C++.

OR

Write a program in C++ to swap values of two variables using call by value mechanism. Define appropriate function in your program.

4. What are macros in C++ ? Write a macro to define PI value and a MAX function.

OR

Write a C++ program to perform four operations namely addition, subtraction, multiplication and division of two numbers given by user as input. Use switch statement to select the operation to be performed.

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

(a) Constructor

(b) Exception Handling

(c) Multiple Inheritance

(d) Templates

PART B

JAVA

1. Explain system development life cycle by taking example of "Student Admission System."

OR

What is a DFD ? List the symbols and mention their purpose in DFD.

2. Write a simple code in Java to explain try, catch and throw statements.

OR

Write a Java program to find whether a given year is a leap year or not.

3. Explain the following Java libraries in short, along with their classes :

(a) java.awt

(b) java.io

(c) java.lang

(d) java.util

OR

What is 'access control' ? Explain the use of Wrapper and Inner classes with suitable examples.

4. Differentiate between 'built in exception' and 'user defined exception' in Java.

OR

What are Interfaces ? Explain the structure for interface with the help of a Java program.

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

(a) Type Casting in Java

(b) "extends" and "final" keywords and their use

(c) Static Variables and Methods

(d) Inheritance

PART C

VISUAL BASIC

1. Describe the system development life cycle method using an example of 'Student Admission System".

OR

Draw a data flow diagram regarding the process and data flow involved in a "Study Centre" of IGNOU.

2. Explain the following functions with an example.

(a) Pmt

(b) ABS

(c) PV function

OR

Define a form. List essential properties of a form. Explain the role of tool box and tool bar in form designing.

3. For the following given control statements, write the syntax. Also provide an example code of each.

(a) Do while . . . loop

(b) Select case statement

OR

Write an event procedure for different command buttons to display sum, difference, and product of any two numbers given as input.

4. Explain the steps involved in creation of an OLE object at design time.

OR

What is an IDE ? Explain the basic features of Visual Basic IDE.

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

(a) Print Command

(b) Indexes and their creation

(c) Multiple Document Interface (MDI)

(d) ActiveX Controls

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