POST GRADUATE DIPLOMA IN LIBRARY AUTOMATION AND NETWORKING (PGDLAN)

Term-End Examination

June, 2024

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.*

P.T.O.

(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. What is a system ? List and explain any five elements of a system.   10

Or

What is Data Flow Diagrams (DFD) ? List the symbols used in construction of DFD. Explain how a DFD is drawn with the help of an example.

2. List various programming paradigms. Explain any two of them with suitable example.   10

Or

What is operator precedence ? Write operator precedence table (symbol, name, explanation) from highest to lowest in order.

3. List and explain the syntax of Decision making statements :   10

(i)　If

(ii)　if-else

(iii)　if-else if

(iv)　Nested if

(v)　Switch

Or

Explain the syntax of : break, continue, goto and return statements.

4. Write a C^{++} program to find the average marks of 10 students in MLI-007 course using for loop. **10**

Or

Write a C^{++} program to print

```
        1
      1 2 1
    1 2 3 2 1
      1 2 1
        1
```

5. Write short notes (in about 250 words each) on any two of the following : **10**

P.T.O.

(a)　Constructor

(b)　Inheritance

(c)　Class and object

(d)　Operator Overloading

Part B : Java

1. Is Java platform independent programming language ? Justify your answer. Also, write feaures of Java. **10**

Or

What is a Data Flow Diagram (DFD) ? Explain use of DFD with the help of an example.

2. Write an algorithm and draw a corresponding flow chart to find the largest number among the three assumed numbers. **10**

Or

How multiple exceptions are handled in Java using "Try and Catch" ? Explain with an example code.

3. What is object oriented programming ? Explain its advantages. Also explain why Java is an object oriented programming language. **10**

Or

What is an interface ? Write a program in Java that defines an interface and a class that implements this interface.

4. Write a menu driven program in Java to add, substract multiply and divide any two numbers entered by the user.   10

Or

Write a Java Program to compute the square, of a number entered by a user using methods. Define class and required methods in your program.

5. Write short notes (in about 250 words each) on any two of the following :   10

(a) Type casting

(b) "Finally" keyword

(c) Access controls (Public, Private, Protected)

(d) Inner classes.

Part C : Visual Basic

1. Explain any five controls of visual basic available in tool Box.   10

P.T.O.

Or

Explian the process of creating a form and labeling fields in Visual Basic.

2. What is system development life cycle ? Explain all the stages of sysem development life cycle in a sequence in which they are performed.   10

Or

What is flow chart ? Draw a flow chart for adding of n natural numbers.

3. Write the syntax for the following control structures with an example for each :   10

(a) Do .... Loop

(b) For .... Next

Or

Write a program in Visual Basic to concat two strings [string 1 = "IGNOU", string 2 = "PGDLAN"]

4. What is control array ? What is its use ? Explain how control array is created ?   10

Or

What is Visual Basic ? Explain advantages and disadvantages of Visual Basic Programming.

5. Write short notes on any two of the following in about 250 words each.   10

    (a) Windows API

    (b) Active × Controls

    (c) OLE

    (d) DLLs

***