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MLI-007

POST GRADUATE DIPLOMA IN LIBRARY AUTOMATION AND NETWORKING

(PGDLAN)

Term-End Examination, 2019

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, whereever necessary. Write the relevant question number before writing the answer.

[PART-A : C++]

1.1 Describe the system development life cycle method using an example of "Automation of a University Library".

OR

1.2 Write and explain the pseudo code for multiply n consecutive numbers starting from 1.

2.1 Write an algorithm and draw corresponding flowchart to find the average of a list of inputs. having N elements.

OR

2.2 With reference to C++, explain the use of the following operators along with their syntax and an example for each :

(a) size-of operator

(b) Arithmetic If operator

(c) Comma operator

3.1 What is "Exception Handling" ? Explain how it can be done in C - Programming with the help of an example program-segment.

OR

3.2 What is polymorphism ? Explain with the help of C program segment.

4.1 Write a program in C++ to calculate the fine on late return of books by the students. Write appropriate data-members and member functions.

Note : Assumptions can be made wherever necessary.

OR

4.2 Write a program in C++ to enter the newly arived (Purchased) books to the library. Write appropriate data-members and members functions.

Note : Assumptions can be made whereever necessary.

5. Write short notes (about 250 words each) on any 2 of the following :

(a) Templates in C++ program

(b) Files and Stream

(c) Function Overloading

(d) Modular Programming

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[PART-B : JAVA]

1.1 Describe System Development Life Cycle taking example of "Student Admission System".

OR

1.2 Describe the basic features of Java Programming Language. What are the advantages of Java Programming Language ?

2.1 What is Inheritance ? Explain with the help of a program-segment, how a class is inherited in Java. Also explainthe use of a Keyword "Super" in Inheritance.

OR

2.2 "Packages are groups of related classes and interfaces". Justify the statement and also explain the process for declaring and importing the packages in Java.

3.1 Create an object for a Class Student. Also write a method Student-marks() that will display the total-marks and percentage on accepting the Enrolment No. and marks for the courses. You must choose proper date members for the class student on the basis of the description above. The maximum number of courses maY be assumed to be 5.

OR

3.2 Define Constuctors and Destructors in Java. Is it possible to overload a Constructor ? If yes, explain how it can be done with the help of Program-segment. If no, then give reasons.

4.1 What is a Static Method ? Why cannot a Static method use "this" ? Explain with an example.

OR

4.2 Draw a flowchart and write a corresponding Java program to multiply two numbers given as input.

5. Write short notes on any 2 of the following (in about 250 words each) :

(a) Java Libraries

(b) Type casting in Java

(c) Bitwise Operators and Logical Operators

(d) Nested Classes.

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[PART-C : VISUAL BASIC]

1.1 Explain the various stages/phases involved in System Development Life Cycle.

OR

1.2 Discuss atleast 5 controls and associated events those can be used for effective and user friendly interfaces using Forms in VB.

2.1 Write an event procedure to calculate the total budget spent for various books (catagorized as per the 10 schools/departments) for the year 2017-18 if individually the budget for each school/department is given. Draw a tentative user interface from design.

OR

2.2 What is the use of DEBUG window ? Explain briefly with the help of an example event-procedure segment.

3.1 What is meant by Control-Array ? Describe the steps to create a Control-Array.

OR

3.2 Explain the processof creating a database in VB.

4.1 Write an event procedure to accept the marks of all the courses (Assignment + Term End Exam) of PGDLAN and display the toal, percentage and associated Grade.

Note : Assumptions can be made wherever necesary.

OR

4.2 Explain the process of creating an OLE object at design time.

5. Write short notes on any 2 of the following in about 250 words each :

(a) Picture Box and Shape controls

(b) Active-X Controls

(c) Data-Aware Controls

(d) DbList, DbCombo and DbGrid Controls.

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