Library VIT Dec. 07 385

F. E. (Sem. II) (All Br.) 22/12/07

Computer Programming - II

Con/5160–07. (REVISED COURSE) CD–5490

(3 Hours) [Total Marks : 100

MASTER

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assumptions made should be **clearly** stated.
(4) **All** computer programs and program segment only in C++.

1	a	Write an object oriented program (in terms of classes and objects) to evaluate the expression for standard deviation as given below $\left[\frac{\sum_{i=1}^{n}(\overline{X}-X_i)^2}{N}\right]^{1/2}$	10
	b	With the help of suitable program explain i)copy constructors ii)Friend functions	10

2		Expand the class member functions to satisfy the functionality described along side the function declaration
		
		class Dmanip
		{
		private :
		
		int N,A[100];
		
		public:
		Dmanip(); // Default constructor
		void Display( );
		void InputArray ( )// input function to read array A
		void InputArray(int M, int X[100]);// overloaded input function
		void Sort( ) // sorting data stored in Array A
		void Search(int data);
		void Insert(int data);
		void Delete(int data);
		void Merge (Dmanip OB1, Dmanip OB2); //Merging A of
		//Object 1 and A of Object 2 resulting in A of object about
		//which the merge function get referenced
		};
			20

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3		Write Object Oriented programs to exemplify different types of inheritance namely • public • protected • private • and multiple and hierarchical Inheritance	20
4		Exemplify Binary Operator overloading with the help of a class and its member functions for overloading the following binary operators (+, -, *, /)	20
5		Write a program to arrange the names of students in descending order their marks , input data consists of student details such as name, ID.no, subject marks of Mathematics, Physics, Chemistry and total of these three.(Note: Use hierarchical struct and array of struct)	20
6	a	Explain abstract classes , late binding, pure virtual functions and virtual classes	10
	b	With help of suitable programs and functions explain parameter passing by reference and parameter passing by value	10
7		Write notes on the following a. Overriding functions b. Function overloading c. Function templates d. Static members of classes and objects	20