Computer Science TEST 1

Marks: 30 Marks   **Time**: 1 Hour 10 Mins

1. What are the Five Pillars/Features of OOP? Explain them in short.   **5 Marks**
2. What is a Pointer? Write a C++ code to show a Function returning a pointer?

1 + 3 = 4 Marks

3. Define the following: **1 * 4 = 4 Marks**
   i.   Copy Constructor
   ii.   Destructor
   iii.   Linear Data Structure
   iv.   Candidate Key

4. Write a C++ Program to show the working of Binary Search on an Array.   **5 Marks**
5. In the given table, display the details of those items whose suppliers code is 22 or Quantity is more than 110.   **2 Marks**

Table : STORE

ItemNo	Item	Scode	Qty	Rate	LastBuy
2005	Sharpener Classic	23	60	8	31-Jun-09
2003	Ball Pen 0.25	22	50	25	01-Feb-10
2002	Gel Pen Premium	21	150	12	24-Feb-10
2006	Gel Pen Classic	21	250	20	11-Mar-09
2001	Eraser Small	22	220	6	19-Jan-09
2004	Eraser Big	22	110	8	02-Dec-09
2009	Ball Pen 0.5	21	180	18	03-Nov-09

6. In the two tables First one named ITEM:

I_ID	ItemName	Manufacturer	Price
PC01	Personal Computer	ABC	35000
LC05	Laptop	ABC	55000
PC03	Personal Computer	XYZ	32000
PC06	Personal Computer	COMP	37000
LC03	Laptop	PQR	57000

Table : CUSTOMER

C_ID	CustomerName	City	I_ID
01	N Roy	Delhi	LC03
06	H Singh	Mumbai	PC03
12	R Pandey	Delhi	PC06
15	C Sharma	Delhi	LC03
16	K Agarwal	Banglore	PC01

i. Display the Customer Name and the Manufacturer if the item exists in both the tables. **2 Marks**

ii. Display the Name and maximum price and of each item. **2 Marks**

7. Convert the following into PostFix: **2 Marks**

P/(Q-R)*S+T

8. Write a C++ program of Addition of two Matrices: **4 Marks**

Bonus Questions:

1. Define Non-linear Data Structure and name some examples. **2 Marks**
2. Evaluate the Following PostFix Expression: **4 Marks**

8 2 3 * 1 / + 4 1 * 2 / +

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