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| --- | --- |
| Student Name: …….………………………………………………………………….... | Student Number: …………………………………………………….………….. |

**Q1: Examine Write A program containing the following :**

1. **Class called person contain the following information :**
* As private : Name , age , gender (F/M)
* Constructor take one parameter (to set age)
* Destructor to print “ end class person “
* Function to print the class information
1. **In main create object from the class and fill the information from the user then print it**

**Q3:** **What will be the output of the following C++ code?**

#include <iostream>

**using** **namespace** std;

**class** Box

{**public**:

 **double** length;

 **double** breadth;

 **double** height;

};

**int** main ()

{

 Box Box1;

 Box Box2;

 **double** volume =0.0;

 Box1.height =5.0;

 Box1.length =6.0;

 Box1.breadth =7.0;

 Box2.height =10.0;

 Box2.length =12.0;

 Box2.breadth =13.0;

 volume =Box1.height \*Box1.length \*Box1.breadth;

 cout <<"Volume of Box1 : "<< volume <<endl;

 volume =Box2.height \*Box2.length \*Box2.breadth;

 cout <<"Volume of Box2 : "<< volume <<endl;

 **return** 0;

}

**Q3:** Write a c++ class called **'student'** with

Data members as a public:

name(string type),

marks1,marks2 (float type)

The program asks the user to enter name and marks. Then calc\_media() calculates the media note and disp() display name and total media mark on screen in different lines.

**Q4:**

1. :

Declare a **publication**  class consist of :

1. the title, price Those variables are private.
2. a **print** function to print all information
3. Default constructor (initialize the variable with suitable values
Title = plain text , price = 0 ).
4. Constructor to set the **price** with a given value.
5. Constructor to set the class variables
6. Add a destructors to print a destroy massage.
7. :

Declare a **BOOK class that inherit class**  **publication**  **publicly** Containing the following :

1. Number of pages
2. Constructor to initialize the variable with suitable values
3. Constructor to set the class variables
4. Add a **print** function to print all information

**Write a main program to test your class functions .**

**Q3:Complete the following program. You may need to make some changes in the code:**

#include <iostream>

#include<string>

using namespace std;

class animal {char sex;

 protected:

 int age;

public :

 string type;

 animal (){cout <<"constructing animal";}

};

class Dog : animal{

 protected:

 string name ;

 // constructor to print "constructing Dog"

 //function insert to set all class info

 };

class Cat : private animal{

 protected:

 string name ;

 // constructor to print "constructing Cat"

 //function insert to set all class info

 };

void main ()

{

//declare object from each class

//fill animal's object information

//fill the Dog's object information’s. using insert function

//fill the Dog and cat objects information without using insert function

}