Object Oriented Programming (Quiz Week 1,2)

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Name and Seat No._____

Q1. Draw proper UML representation of anyone (1) class of your choice:

Point	Vector	Complex Number	Rational Number	Line

Q2. Must prepare Weekly Error Dictionary as per following format:

Class /Object Name	Concept Name	2 to 5 words error description	Way to reproduce error (2-5 words description)
Week 1			
Week 2			
Week 2			

Q3. Write driver class Code in both C++ and JAVA so that following operations executes successfully on class designed in Q1.

C++

```
int main ()
{
  //Instantiate class or create objects
   1- invoke null constructor
   2- invoke parametrized constructor
   3- invoke copy constructor

   //Show objects
  1- invoke show/print method of class
  2-  Think about  cout << myObj;

  //Add Two objects of same type
   1-  Point p3 = P2 + P1
   2-  Point p3 = p1.add(p2)

   //Multiply Two objects of same type

   //Subtract Two objects of same type

   return 0;
}
```

JAVA

```
public class myAppDriver{

public static void main(String[] args)
{


   Same functionality required in JAVA
  i.e.,

      (1) invoke all 3 types of constructors
      (2) show object
      (3) add, subtract, multiply objects



} // end main

} // end class
```

Q4. Consider a class named "Game", which of the following is/are proper constructor(s) for the class Game.

a. Dice( ); **b.** game( ); **c.** int Game( ); **d.** Game( );

Q5. Spot the error(s) in the following code snippet.

NOTE: Focus on the concepts, don't worry about the body of the methods/functions/constructors.

LINE	CODE	CORRECT/INCORRECT + REASON
1	`class Car`	
2	`{`	
3	`public:`	
4	`    Dice() { }`	
5	`    Car() { }`	
6	`    void Dice() { }`	
7	`    void Car() { }`	
8	`Car(int wheels, string color) { }`	
9	`Car(int seats, int doors) { }`	
10	`Car(int price, string model) { }`	
11		
12	`private:`	
13	`    Car(int price) { }`	
14	`}`	

Q6. Record errors you face when execute given function. Which code is correct and why?

Code I

```
class Complex
{
  public:
        int real;
        float imaginary;

        ostream& operator<<(ostream &out, Complex &obj)
        {
                out << obj.real << obj.imaginary ;
                return out;
        }
}
```

Code 2

```
class Complex
{
  public:
        int real;
        float imaginary;
};
ostream& operator<<(ostream &out, Complex &obj)
{
        out << obj.real << obj.imaginary ;
        return out;
}
```

Q7. Is there any error in the code stated below? If yes, then state the error otherwise write the output of the program.

abc.h

```
class abc
{
public:
  int a; float c;
  abc() { a = 1; b = 2; c = 3.3;}

private:
     int b;
     abc(int a, int b, float c)
     {
      this->a = a;
      this->b = b;
      this->c = c;
     }
}
```

program.cpp

```
#include <iostream>
#include "abc.h"
void main()
{
     abc obj;
     abc obj2(2, 3, 5.5);

     obj.a = obj.b + obj.c

     cout<< obj.a;
     cout<< obj.b;

     cout<< obj2.a << obj2.b <<
obj2.c;
}
```

Q8. When Compiler Creates copy of the parameter passed. It is called _____ .

is Pass by Reference	is Pass by Pointer	is Pass by Value

Q9. The two assumptions are true when we write code for:

Assignment Operator	Copy Constructor	Destructor	insertion Operator

- ✓ The object does not already exist.
- ✓ The object is not being copied onto itself.

Q10. Trace the output:

```
class Foo {
  int x;
  int y;
public:
  Foo (int a, int b) { x = a; y = b; }

  Foo (void) { x = -1; y = -2; }

  void print() { cout << x << ' ' << y << endl; }
};
```

```
class Bar {
 int z;
public:
  Bar (void) { z = 42; }

void print() {cout << z<<endl;
}

void doit() { z += 1; }
}
```

Give main/driver Code	Your Answer

`int main(void) {`
`  Foo f;`
`  f.print();`
`}`	

`int main(void) {`
`  Foo f(5, 10);`
`  Bar* b = (Bar*) &f;`
`  b->print();`
`  b += 1;`
`  b->print();`
`}`	

`void doit(Bar b) {`
`  b.doit();`
`}`
 	
`int main(void) {`
`  Bar b;`
`  b.print();`
`  b.doit();`
`  doit(b);`
`  b.print();`
`}`	