```
public class Car{
private String model;
private int year;

public Car(String m,int y  ){

model=m;
year=y;
}
Public void setModel(String m)
{
model=m;
}

Public void setYear(int y)
{
year=y;
}
public  String getModel(){
return model;
}
public int getYear(){
return year;
}

public void displayCar()
{
System.out.println(“Model is :”+model);
System.out.println(“year is :”+year);

}

public boolean equals(Object o){
 Car C=(Car)o;

Return model==C. model&& year==C. year;
}
}
```

```
public class Employee{

private String fname;
private String lname;
private Double salary;
public Employee(String f , String m , double s){

fname=f;
lname=l;
if(s<0)
{salary=1000;}
else
{salary=s;}
}
Public void setfname(String f){
fname=f;
}
Public void setlname(String l){
lname=l;
}
Public void  setsalary(double s){
if(s<0)
{salary=1000;}
else
{salary=s;}

}


Public String getfname(){
Return fname;
}
Public String getlname(){
Return lname;
}
Public double getsalary(){
Return salary;
;
}
Public double yearlysalary(){
Return salary*12;
}
public String toString(){
return fname+”  “+lname+” ”+salary;
```

```
}
}



Public class circle{
Private double radius;
Private double area;
Private String color;
Public circle(){}
 Public circle(double r, String clr){
Radius=r;
Color=clr;
}
Public double getRadius(){
Return radius;
}
Public double getArea(){
CalculateArea();
Return area;
}
Public void CalculateArea(){
area= 3.14*radius*radius;
}

}
```

5. If a reference variable is set to null, what does it mean?

A. The object is destroyed immediately
B. The reference variable points to nothing
C. The object is copied
D. The reference variable is deleted

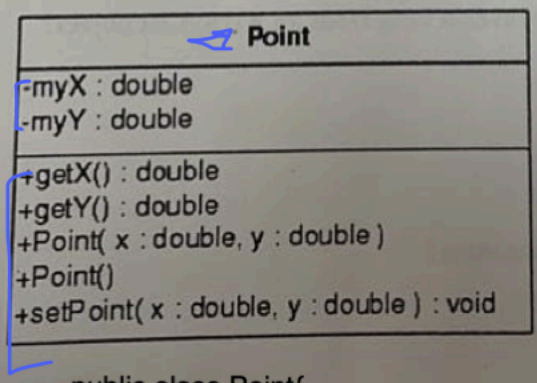
6. What is the purpose of the `equals()` method in Java?

A. To compare the memory addresses of two objects
B. To compare the contents of two objects
C. To convert an object to a string
D. To initialize an object

7. The length field of a two-dimensional array gives the number of...

A. Rows
B. Columns
C. Rows + Columns
D. Rows^2

Question 3: Convert the UML class diagram into Java code:




```
public class Point{
private double myX;
private double myY;
public Point(){}
public Point(double x,double y){
myX=x;
myY=y;
}
public double getX(){return myX;}
public double getY(){ return myY;}
public void setPoint(double x,double y){
myX=x;
myY=y;
}
```

Question 1: Mark (T) if the statement is True and (F) if it is False:

1. The main advantage of using the ***this*** reference in a constructor is to create a new object.	F
2. A valid way to call a static method is ClassName.methodName().	T
3. Fields of an object store data.	T
4. Method overloading means two or more methods in a class may have the same name as long as their parameter lists are different.	T
5. Arrays can store different type of data at a time.	F
6. A private member of a class cannot be accessed from outside the class.	T
7. The PrintWriter class can be used to write text to a file.	T

Question 2: Choose the correct answer for the following question:

1. What is the keyword used to declare a method that can be called without creating an instance of its class?

A. static
B. public
C. final
D. private

2. Which of the following methods is used to remove an item from an ArrayList object?

A. delete
B. remove
C. erase
D. clear

3. What does the `toString()` method do in a Java class?

A. Converts an object to a string representation
B. Compares two objects for equality
C. Initializes an object
D. Destroys an object

4. How do you declare an array that will hold 6 integers in Java?

A. int numbers = new int[6];
B. int[] numbers = new int[6];
C. int numbers[] = new int[6];
D. Both B and C

Question 1: Mark (T) if the statement is True and (F) if it is False:

1. The static keyword can be used to declare class-level variables and methods.	T
2. The Files class provides methods for reading, writing, and manipulating files.	F
3. Fields of an object store data and reference.	T
4. The JVM periodically performs a process called garbage collection to automatically remove unreferenced objects from memory.	T
5. Arrays can store only one type of data at a time.	T
6. To delete an item from an ArrayList object, you use the delete method.	F
7. The size of an array can be obtained via its Length constant.	T

Question 2: Choose the correct answer for the following question:

1. Making an object of one class a field in another class is called:

A. Aggregation
B. Inheritance
C. garbage collection
D. finalization

2. When the == operator is used with reference variables:

A. The contents of the objects are compared.
B. the memory address of the objects are compared
C. The fields of the objects are compared
D. The methods of the objects are compared

3. The toString method of a class can be called *implicitly*:

A. When an object of the class is passed to println or print.
B. when an object of the class is concatenated with a string.
C. A & B
D. None of the above.

4. What happens when a method returns an object?

A. A copy of the object is created and returned.
B. A pointer to the object's location in memory is returned.
C. The object is deleted after the method finishes.
D. The object is created within the method and then returned.

Question 4: Write a Java program to check if an array contains duplicates.

```
int[]  a ={2,4,5,2,7,4};
boolean dup=false;

for(int i=0;i<a.length;i++)
{
    for (int j=i+1;j++)
   {
     if(a[i]==a[j])
      {
        dub=true;
      }
   }
}

if(dub==true)

{
system.out.print("dublicate");

}else
System.out.print ("No dublicate");
```

d) Two or more methods in a class may have different names and their parameter lists are the same.

6. Which of the following statements about array size is correct?

A) The size of an array can be changed after it is created.
B) The size of an array is fixed once it is created.
C) The size of an array must be a negative number.
D) The size of an array is always 10.

7. What will happen if you try to access an array index that is out of bounds?

A) The program will ignore the statement.
B) The program will throw an ArrayIndexOutOfBoundsException.
C) The program will return a default value.
D) The program will automatically resize the array.

Question 3: Convert the UML class diagram into Java code: