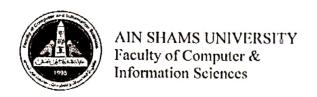


Subject: Object Oriented Programming

Duration: 2 Hours

Examiner: Mohamed Mabrouk Examinee: Second Level Students

cademic year: 2020 - 2021	Number of pages: 5
Answer the following questions:	(Total points: 100)
1st Question	marks: 20
Choose the best answer:	
1- Which method is used to return the string rep	resentation of an object of a class?
⁷ a. hashCode()	b. equals()
c. toString()	d. getClass()
2- If a method in super class is declared as prote	ected, then which of those access modifiers can be
used when overriding this method in a subclass	·····
a. Protected only	b. Public only
•	•
c. Protected or public	d. Private only
3- What does the expression "float val = $10 / 0$;	
a. 0	b. Not a number
c. ArithmeticException	d. Infinity
4- In which process, a local variable has the sam	e name as one of the instance variables?
a. Inheritance	b. Polymorphism
c. Variable shadowing	d. Overloading
c. Variable shadowing	<u></u>
5- Which statement is true about the final keywo	
a. Final variable has no value	b. Value of a final variable cannot be changed
c. Final variables must be public	d. Final variables cannot be public
6- The types of exceptions in Java are	
a. Defined and undefined	b. Checked and unchecked
c. Managed and unmanaged	d. Final and nonfinal
7- Given that $x = 10$ and $y = 5$, what would be t	he output of expression "++ $x + y - y + x++$ "?
a. 20	b. 22
c. 25	d. 23
6. 23	u. 20
8- Which statement is true about inheritance?	
a. A class can extend more than one class	
b. A class can extend only one class but many in	
c. A class can extend one class and one interface	
d. A class can extend as many classes and interfa-	nces as required
9- Which of the following declares an abstract m	ethod in an abstract Java class?
a. public abstract method();	b. public void abstract method();
c. public abstract void method() {}	d. public abstract void method();
10- Which of the following modifiers cannot be used with constructors?	



6.1

a. privatec. public

b. protectedd. abstract

2nd Question

marks: 20

Choose the best answer:

1- What is the expected output of the following code snippet:

```
class TestApp {
  public static void main(String[] args) {
    float STATIC = 2.5F;
    System.out.println(STATIC);
  }
}
```

a. Throws an exception

- b. 2.5
- c. Gives a compilation error as STATIC is a keyword
- d. None of these

2- What is the expected output of the following code snippet:

```
class TestApp {
  public static void main(String{] args) {
    try {
      int x; '
      return;
  } catch (Exception e) {
      System.out.print("inCatch");
  } finally {
      System.out.print("inFinally");
    }
}
```

a. inCatch

b. inFinally

c. inCatchinFinally

d. Nothing is printed

3- What is the expected output of the following code snippet:

```
class TestApp {
  public static yold main(String[] args) {
    String s1 = new String("Hello");
    String s2 = new String("Hello");

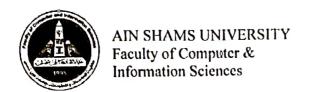
    System.out.print(s1.equals(s2) + " ");
    System.out.print(s1' == s2);
  }
}
```

a. true true

b. true false

c. false true

d. false false



4- What is the expected output of the following code snippet:

```
class Animal {
    public Animal() {
        System.out.println("Animal");
    }
} class Wild extends Animal {
    public Wild() {
        System.out.println("Wild");
        super();
    }
} class TestApp {
    public static void main(String[] args) {
        Animal wildAnimal = new Wild();
    }
}
```

- a. An exception is thrown
- c. Wild

- b. Compilation error
- d. Animal

5- What is the expected output of the following code snippet:

```
class Person {
    public void talk() {
        System.out.print("I am a Person ");
    }
} class Student extends Person {
    public void talk() {
        System.out.print("I am a Student ");
    }
} class TestApp {
    public static void main(String[] args) {
        Person p = new Student();
        p.talk();
    }
}
```

- a. I am a Person I am a Student
- c. I am a Student

- b. I am a Student I am a Person
- d. I am a Person

6- What is the expected output of the following code snippet:

```
class TestApp {
    public static void main(String[] args) {
        int[] arr = new int[3];
        System out.println(arr[0]);
    }
}
```

- a. An exception is thrown
- c. 0

- b. Compilation error
- d. null

7- What is the expected output of the following code snippet:

```
class TestApp {
  int value = 10;
  public void method(int value) {
    value += 1;
    System.out.print(++value);
  }
  public static void main(String[] args) {
    TestApp t = new TestApp();
    t.method(3);
  }
}
```

a. 11 c. 5 b. 12

d. 4

8- What is the expected output of the following code snippet:

```
interface A { .}
class B { }
class C extends B implements A { }

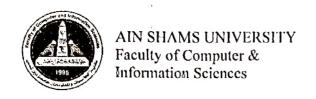
class TestApp {
  public static void main(String[] args) {
    A obj = new C();
    if(obj instanceof A)
        System,out.print("instanceOf A ");
    if(obj instanceof B)
        System.out.print("instanceOf B ");
}
```

- a. insanceOf A
- c. insanceOf A insanceOf b

- b. insanceOf B
- d. Nothing

9- What is the expected output of the following code snippet:

```
class TestApp {
    public int add(int n1, int n2) {
        return n1 + n2;
    }
    public float add(int n1, int n2) {
        return n1 + n2;
    }
    public static void main(String[] args) {
        TestApp t = new TestApp();
        t.add(3, 4);
    }
}
```



a. 7c. An exception is thrown

b. 7.0d. Compilation error

10- What is the expected output of the following code snippet:

```
class TestApp {
    int num = 100;
    public void calc(int num) { this.num = num * 10; }
    public void printNum() { System.out.println(num); }
    public static void main(String[] args) {
        \times Calculator();
        obj.calc(2);
        obj.printNum();
     }
}

a. 100
     b. 1000
     c. 2
     d. 20
```

3rd Question

marks: 30

```
Given the following class representing a point:

public class Point {
  public int x;
  public int y;
  public Point (int x, int y) {
    this.x = x;
    this.y = y;
  }
}
```

Define a class called "Line" which represents a line with two points, start and end. Further, define required constructor(s), getters, and toString() methods.

4th Question

marks: 30

Given the following class representing a point:

```
public class Book {
   public String isbn;
   public String title;
   public float price;
   public Book (String isbn, String title, float price) {
      this.isbn = isbn;
      this.title = title;
      this.price = price;
}
```

We would like to extend this class to support sorting books by price DESCENDINGLY.