



Examiner: Mohamed Mabrouk
Duration: 45 Minutes
Number of pages: 2
Academic year: 2020 - 2021
Group: 2

Answer the following ... questions:

(Total points: 100)

1st Question

marks: 50

Choose the best answer:

1- Which of those method types CANNOT be declared abstract _____

- a. Constructors
- b. Static methods
- c. Private methods
- d. Constructors and static methods

2- If a class is declared abstract then it can contain which of the following method types _____

- a. Concrete methods only
- b. Abstract methods only
- c. Constructors only
- d. all of them

3- Which of the following is correct about parameters passed to main method _____

- a. main cannot take parameters
- b. It can take a single parameter
- c. It takes as many parameters as it needs
- d. It takes an array of parameters

4- Garbage collector takes care of objects that are not needed anymore and will remove them from memory. State True or False.?

- a. True
- b. False
- c. May be
- d. Can't say

5- Strings are reference (non-primitive) type. State True or False.?

- a. True
- b. False
- c. May be
- d. Can't say

2nd Question

marks: 50

What is the expected output of the following program?

```
abstract class Shape {
    public abstract void drawShape();
}

class Rectangle extends Shape {
    public void drawShape() {
        System.out.println("Drawing rectangle");
    }
}
```



AIN SHAMS UNIVERSITY
Faculty of Computer &
Information Sciences

```
class Circle extends Shape{
    public void drawShape(){
        System.out.println("Drawing circle");
    }

    public static void main(String[] args){
        Shape[] shapes = new Shape[2];
        shapes[0] = new Circle();
        shapes[1] = new Rectangle();
        for (Shape shape:shapes) {
            shape.drawShape();
        }
    }
}
```

Drawing circle
Drawing rectangle

With My Best Regards,

Mohamed Mabrouk