



The Egyptian E-Learning University

SWE203

Programming languages III

Quiz 1

Faculty	Information Technology
Semester	Fall 2019
Time Allowed	30 min
Total Mark	10
Mark Distribution	Question 1 3 marks
	Question 2 2 marks
	Question 3 5 marks
	Question 4 2 marks
No. of Pages (including cover page)	4 pages
Material provided	None
Equipment permitted	None
Additional Instructions	None

No books, paper or electronic devices are permitted to be brought into the examination room other than those specified above.

Question 1: Choose the correct answer.

(3 marks)

a) What is the value of n after the following switch statement?

```
int n = 22;
switch(n)
{
    case 20: n++;
             break;
    case 22: n--;
    case 23: --n;
             break;
    case 24: n*=3;
             break;
    default: n = n*5;
};
i) 20
ii) 21
iii) 22
iv) 110
```

b) Choose the correct answer if we want to add the weight=2 & price=20 of the apple item;

```
class product {
    public int weight;
    public float price;
}
public class CAppleClass{
    public static void main(String args[]) {
        product apple = new product ();
        Fill in here from the choices below
    }
}
```

- i) apple.weight=2; apple.price= (float) 20.0;
- ii) apple->weight=2; apple->price= (int) 20.0;
- iii) apple-weight=2; apple--price= (float) 20.0;
- iv) Error.

c) Which of the following class definitions is correct in Java?

- i) `public int class Cstudent{
 public static void main (String args[]) {
 int x = 20, y = 10, z=0;
 if (x > 29)
 y = x + 11;
 System.out.println("x = " + x + ", y = " + y + ", z = " + z);
 }
};`
- ii) `public class Cstudent{
 public static void main (String args[]) {
 int x = 20, y = 10, z=0;
 if (x > 29)
 y = x + 11;
 System.out.println("x = " + x + ", y = " + y + ", z = " + z);
 }
};`
- iii) `public class Cstudent{
 public static void main (String args[]) {
 int x = 20, y = 10, z=0;
 if (x > 29)
 y = x + 11;
 System.out.println("x = " + x + ", y = " + y + ", z = " + z);
 }
}`
- iv) `int public class Cstudent{
 public static void main (String args[]) {
 int x = 20, y = 10, z=0;
 if (x > 29)
 y = x + 11;
 System.out.println("x = " + x + ", y = " + y + ", z = " + z);
 }
}`

Question 2: Is the following statement TRUE or FALSE? (2 marks)

- a) Objects of abstract superclasses can be instantiated
- b) Protected members are accessible only to methods of their class and to methods of their subclasses
- c) When a subclass redefines a superclass method by using the same signature, the subclass is said to overload that superclass method.
- d) Constructors cannot take arguments and cannot return a value

Question 3:

(5 marks)

Determine the output of the following programs (a-b), as it would appear on the screen. Assume that the code compiles correctly. Unless otherwise specified, only output the decimal portion of floating-point values if a decimal portion exists. For example,

For this code segment
Double val = 5.6;
cout << "val = " << val;
you should write
val = 5.6

```
a) public class MyClass {
    static void Mystery(int [] A, int size)
    {
        int temp;
        int j=size-1;
        for(int i=0;i<=j;i++)
        {
            temp=A[i];
            A[i]=A[j];
            A[j]=temp;
            j--;
        }
    }
    public static void main(String args[]) {
        int [] A={7,3,5,4,9};
        Mystery(A,5);
        for(int i=0;i<5;i++)
            System.out.println("The output is " + A[i] + " ");
        Mystery(A,5);
        for(int i=0;i<5;i++)
            System.out.println("The output is " + A[i] + " ");
    }
}
```

```

b) public class MyClass {
    public static void main(String args[]) {
        int x = 20, y = 10, z;
        if (x > 29)
            y = x + 11;
        else if (++x > 20)
            y = x + 40;
        else
            y = x + 100;
            z = y - 5;
        if (x-- < 21)
            y = x - 10;
        System.out.println("x = " + x + ", y = " + y + ", z = " + z );
    }
}

```

Question 4:

(2 marks)

- a) Determine if the following program will cause error or no? b) if yes what is the type of the error? C) Identify the line/lines number that will cause the error? D) Assume that the code compiles incorrectly, write the code that solves the problem?

Cstudent.java	Cstudenttest.java
<pre> 1 public class Cstudent{ 2 private static double science_mark; 3 private static double math_mark; 4 private static double calculate_total_marks(){ 5 double total; 6 total = math_mark+science_mark; 7 return total; 8 } 9 public static void calculate_grade (){ 10 char grade='0'; 11 double checktotal=calculate_total_marks()/2; 12 if (checktotal>=80) grade='A'; 13 else if ((checktotal>=60) && (checktotal<=80)) grade='B'; 14 else grade='C'; 15 System.out.println(grade); 16 } 17 } </pre>	<pre> 1 public class Cstudenttest{ 2 public static void main(String arg[]){ 3 float z=0; 4 Cstudent cc=new Cstudent(); 5 cc.science_mark=55; 6 cc.math_mark= 70; 7 cc.calculate_total_marks(); 8 cc.calculate_grade (); 9 } 10 } </pre>

Good Luck

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