

King Saud University

College of Computer and Information Sciences

Computer Science Department



Course Code	CSC 111		
Course Title	Introduction to Programming		
Section No.			
Semester	Spring 2020		
Exam	Midterm 1 Exam - C		
Date	4/3/2020	Duration: 90 minutes	
Student Name			
Student ID			

Course Learning Outcomes		Relevant question	Full mark	Student mark
CLO 1	a) Apply knowledge of computing and mathematics appropriate to the discipline;	1	5	
CLO 2	i) Use current techniques, skills, and tools necessary for computing practice.	2	5	
Feedback/Comments:				

Question 1: Put your answers (multiple choice questions) in the following table. (5 Marks)

Question	1	2	3	4	5	6	7	8	9	10
Answer										

1) What is the output of the following program?

```
public class Mid1Qs {
    public static void main(String []args) {
        System.out.print(10*20 + "Ten");
        System.out.println("Twenty" + 10*20);
    }
}
```

- a) 10*20TenTwenty200 b) 200TenTwenty200 c) 10*20TenTwenty10*20 d) 200TenTwenty10*20

2) What, if any, is the output of the following program?

```
public class Mid1Qs {
    public static void main(String []args)
    {
        boolean _0, $;
        int a = 1;
        _0 = $ = (boolean)a;
        System.out.print(_0 || $);
    }
}
```

- a) true b) false c) Compilation error d) 1

3) What, if any, is the output of the following program?

```
public class Mid1Qs {
    public static void main(String []args)
    {
        int price = 100, quantity = 2;
        double tax = 5/100, sellPrice;
        sellPrice = price * quantity++ + tax % 100;
        System.out.print(sellPrice);
    }
}
```

- a) Compilation error b) 200.0 c) 200.05 d) 300.05

4) What is the output for the following program?

```
public class CSC111Mid1Questions {
    public static void main(String[] args) {
        char x = 'B'; int i=0;
        switch(x) {
            case 'A':
                i = 1;
                break;
            case 'B':
                i = 2;
            case 'C':
                i = 3;
                break;
            default:
                i = -1;
        }
        System.out.println(i);
    }
}
```

- a) 1 b) 2 c) 3 d) -1

5) What is the output of the following program?

```
public class CSC111Mid1Questions {
    public static void main(String[] args)
    {
        int i = 0, sum = 0;
        while(i < 5){
            sum+=i;
            i++;
        }
        while(i < 6){
            sum+=i;
            i++;
        }
        System.out.println(sum + " , " + i);
    }
}
```

- a) 15, 5 b) 15, 6 c) 21, 5 d) 21, 6

6) What, if any, is the output of the following program?

```
public class CSC111Mid1Questions {
    public static void main(String[] args) {
        int i=1;
        while(i<10)
            i+=3;
        System.out.print(i);
    }
}
```

- a) 4710 b) 10 c) Runtime error d) Compilation error

7) What, if any, is the output of the following program?

```
public class CSC111Mid1Questions {
    public static void main(String[] args) {
        int x = 245;
        int count = 0;
        do{
            x = x / 10;
            count++;
        } while (x > 0);
        System.out.println(count);
    }
}
```

- a) 1 b) 2 c) 3 d) Compilation error

8) What is the output of the following program?

```
public class CSC111Mid1Questions {
    public static void main(String[] args) {
        int number = 20;
        do {
            if(number % 5 == 0)
                System.out.print("*");
            number--;
        }while(number > 0);
    }
}
```

- a) ** b) *** c) **** d) *****

9) Assume $x=4$, which of the following Boolean expression is true?

- a) $!(x==4)$ b) $x!=4$ c) $x==5$ d) $x!=5$

10) What, if any, the output of the following program?

```
public class CSC111Mid1Questions {
    public static void main(String[] args) {
        int x = 5, y = 3, z = 1;
        if(x+2*y/z<10 || y*y+z>10)
            System.out.println(2*x/y+z);
        else if(x*2%10==0)
            System.out.println(2*z+x);
        else
            System.out.println(x%2);
    }
}
```

- a) 4 b) 7 c) 1 d) Compilation error

Question 2. (5 marks)

A. (2.5 marks) The following program reads the first name from the user and prints each character in a separate line. Sample of the input and output of this program is given below. Complete the missing code by filling in the blanks.

Sample output:

Enter your first name: Ahmed

Your first name (each character in a line):

A
h
m
e
d

```
import java.util.Scanner;
public class test {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Enter your first name: ");
        String name = input.next();
        int index = 0;
        System.out.println("Your first name (each character in a line): ");

        while( ..... ) {

            System.out.println( ..... );

            .....;
        }
    }
}
```


B. (2.5 marks) Consider the following program and answer the two questions below

B.1) What will be the output of the program if the entered value is 22

B.2) Convert the switch statement to an equivalent if-else statement.

```
import java.util.*;
public class Program
{
    static Scanner input=new Scanner (System.in);
    public static void main(String args[])
    {
        int a = input.nextInt();
        switch (a%10){
            case 0: a = a + 13;
            case 1: System.out.println("a " + (a+1) );
                    a = a + 20;
                    break;
            case 2: a++;
                    System.out.println("a " + a );
            case 3: a *= 2 ;
        }
        System.out.println("a " + a );
    }
}
```

Answer B.1:

Answer B.2: