

		<h1>King Saud University</h1> <p>College of Computer and Information Sciences Computer Science Department</p>	
		Course Code:	CSC 111
		Course Title:	Introduction to Programming
		Semester:	Fall 2018-19
		Exercises Cover Sheet:	<b>Mid 1 Exam</b>
		Duration: 90 min	
Student Name:			
Student ID:			
Student Section No.			
Tick the Relevant	Computer Science B.Sc. Program ABET Student Outcomes	Question No. Relevant Is Hyperlinked	Covering %
√	a) Apply knowledge of computing and mathematics appropriate to the discipline;	1,2	50%
	b) Analyze a problem, and identify and define the computing requirements appropriate to its solution;		
	c) Design, implement and evaluate a computer-based system, process, component, or program to meet desired needs;		
	d) Function effectively on teams to accomplish a common goal;		
	e) Understanding of professional, ethical, legal, security, and social issues and responsibilities;		
	f) Communicate effectively with a range of audiences;		
	g) Analyze the local and global impact of computing on individuals, organizations and society;		
	h) Recognition of the need for, and an ability to engage in, continuing professional development;		
√	i) Use current techniques, skills, and tools necessary for computing practices.	1,2	50%
	j) Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;		
	k) Apply design and development principles in the construction of software systems of varying complexity;		



**Question 1. (7 Marks)**

Put your answers of the question 1 (**multiple choice questions**) in the following table:

Question	Answer
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

Question 1: **MCQ** (7 marks)

1. What is the output of this program?

```
class Output {  
    public static void main(String args[]) {  
        int a = 1, b = 2, c, d;  
        c = ++b;        d = a++;  
        c++;        b++;        ++a;  
        System.out.println(a + " " + b + " " + c);  
    } }  
}
```

- a) 3 3 4
- b) 3 4 3
- c) 3 4 4
- d) 3 2 4

2. What is the output of this program?

```
class variable_scope{  
    public static void main(String args[]) {  
        int x = 5;  
        {  
            int y = 6;  
            System.out.print(x + " " + y);  
        }  
        System.out.println(x + " " + y);  
    } }  
}
```

- a) 5 6 5 6
- b) 5 6 5
- c) Runtime error
- d) Compilation error

3. What is the output of this program?

```
class operators {  
    public static void main(String args[]){  
        int var1 = 5;  
        int var2 = 6;  
        int var3;  
        var3 = ++ var2 * var1 / var2 + var2;  
        System.out.print(var3);  
    }  
}
```

- a) 10
- b) 11
- c) 12
- d) 56

4. What will be printed as the output of the following program?

```
public class testincr {  
    public static void main(String args[]) {  
        int i = 0;  
        i = i++ + i;  
        System.out.println("i = " + i++);  
    }  
}
```

- (a) i = 0    (b) i = 2    (c) i = 1    (d) i = 3    (e) Compilation Error.

5. Which of these methods of String class is used to obtain character at a specified index?

- a) char()
- b) Charat()
- c) charAt()
- d) charat()

6. What is the output when you try to compile and run the following code?

```
public class Switch {  
    public static void main(String[] args){  
        int i = 1, j;  
        switch( i ){  
            case 0: j = 0;  
                System.out.print( j );  
            case 1: j = 1;  
                System.out.print( j );  
            case 2: j = 2;  
                System.out.print( j );  
            default: j = -1;  
                System.out.print( j );  
        }  
    }  
}
```

- a) 12                      b) 1                      c) 12-1                      d) Compilation error

7. What does the following statement print?

```
System.out.print((double)((int)(5/2.0)));
```

- a) 2
- b) 2.5
- c) 2.0
- d) Compilation error

8. After the execution of the following code, what will be the values of x, y and z?

```
int x, y, z;  
y = 1;  
z = 5;  
x = 0 - (++y) + z++;
```

- a) x = 4, y = 2, z = 6
- b) x = 3, y = 1, z = 5
- c) x = 3, y = 2, z = 6
- d) x = -7, y = 1, z = 5

9. What is the output of the following code segment?

```
public class MyClass {  
    public static void main(String [] args) {  
        char x = 'A';  
        while(x != 'D'){  
            switch(x){  
                case 'A':  
                    System.out.print(x);  
                    x = 'D';  
                case 'B':  
                    System.out.print(x);  
                    x = 'C';  
                    break;  
                case 'C':  
                    System.out.print(x);  
                    x = 'D';  
                default:  
                    break;  
            }  
        }  
    }  
}
```

- a) AD                      b) ADCD                      c) ADC                      d) AC

10. What is the output of this program?

```
class Output {  
    public static void main(String args[]) {  
        int x , y = 1;  
        x = 10;  
        if (x != 10 && x / 0 == 0)  
            System.out.println(y);  
        else  
            System.out.println(++y);  
    }  
}
```

- a) 1  
b) Runtime error owing to division by zero in if condition  
c) 2  
d) Syntax error

11. What is the output of the following code:

```
String ali=new String("ali");  
System.out.print(ali.equals("ali"));  
System.out.print(ali.equalsIgnoreCase("Ali"));
```

- a) falsetrue              b) truefalse              c) truetrue              d) falsefalse

12. What output is produced by the segment of code shown below:

```
int x = 12;
if (x > 12)
if ( x < 15)
System.out.print("BLUE");
else
System.out.print("GREEN");
System.out.print("JEANS");
```

- a) BLUE      b) GREENJEANS  
c) JEANS      d) BLUEJEANS

13. what is the output of the following code fragment:

```
int x=1;
while(x++ !=4)
    System.out.println(x++);
```

- a) 246              b) infinite loop              c) 2468              d) Syntax error

14. What output is produced by the segment of code shown below:

```
int x = 12;
if (x > 12){
    if ( x < 15)
        System.out.print("BLUE");
    }else
        System.out.print("GREEN");
System.out.print("JEANS");
```

- a) BLUE              b) JEANS  
c) GREENJEANS      d) BLUEJEANS

**Question 2:** (3 marks)

a- Convert the following switch statement to if else statement: (1 marks)

```
switch (var1) {  
    default:  
        x = 1;  
    case 9:  
        x = 2;  
    case 7:  
        x = 3;  
}
```

Answer:

b- Write a java statement to decrease the employee salary (salary) by 5% of his base salary (base) for each absent day (absent). (1 mark)

Hint: Assume that base salary and absent variables are declared and initialized.

Example: base=2000, absent=3 then salary will be 1700

Answer:

c- What is the output of this program? (1 mark)

```
class Output{  
    public static void main(String args[])  
    {  
        int a,b,c,d;  
        a=b=c=d=20;  
        a+=b-c*=d/=20;
```



```
System.out.println("a="+a+" b="+b+" c="+c+" d="+d);}}
```

Answer:

Result					
Question No.	Relevant Student Outcome	SO is Covered by %	Full Mark	Student Mark	Assessor's Feedback
1	a	70	7		
2	i	30	3		
Totals		100%	10		
I certify that the work contained within this assignment is all my own work and referenced where required.  Student Signature: _____ Date: _____					Feedback Received:  Student Signature: _____ Date: _____