

Department of Statistics & Operations Research
College of Science
King Saud University
CSC 201

First Midterm Exam
Second Semester 1438 – 1439

Student's Name:	
Student's Number:	
Section's Number:	
Teacher's Name:	

A. What does the following code fragment write to the monitor?

```
int sum = 14;  
if ( sum < 20 )  
    System.out.print("Under ");  
else  
    System.out.print("Over ");  
System.out.println("the limit.");
```

- [a] Under [b] Over [c] Under the limit [d] Over the limit

B. The statement `i++`; is equivalent to

- [a] `i = i + i`; [b] `i = i + 1`; [c] `i = i - 1`; [d] `i --`;

C. Which looping process checks the test condition at the end of the loop?

- [a] for loop [b] while loop [c] do-while loop
[d] no looping process checks the test condition at the end

D. Which of the following is a correct comment?

- a) `*/ Comments */` b) `** Comment **` c) `/* Comment */` d) `{ Comment }`

E. Which of the following is the correct operator to compare two variables?

- a) `:=` b) `=` c) equal d) `==`

Question 2 (2.5 Marks)

Write a program that takes a positive integer from the user and prints the number. Display an error message if the user enters a negative number.

Sample Run:

Enter the Positive number: 5

The Positive number is 5

Enter the Positive number: -5

It is an negative number.

```
#include <iostream>
using namespace std;
int main ( )
{
    int a;
    cout << " Enter the positive number: ";
    cin >> a;
    if ( a >= 0 )
        cout << " The positive number is " << a << endl;
    else
        cout << " It is an negative number " << endl;
    return 0;
}
```

Question 3 (2.5 Marks)

Using a while loop, write a program that reads integers from a user until their sum is 100.

Sample Run:

Enter a number: 46

Sum is now 46

Enter a number: 42

Sum is now 88

Enter a number: 20

Sum is now 108

The sum has reached 100

```
#include <iostream>
using namespace std;
int main ( )
{
    int a, sum;
    sum = 0;
    while ( sum <= 100)
    {
        cout << " Enter a number:" << endl;
        cin >> a;
        sum = sum + a;
    }
    cout << " The sum is now " << sum << endl;
    cout << " The sum has reached 100." << endl;
    return 0;
}
```

Question 4: (5 Marks)

Using switch statement, write a program that reads a number and prints whether the number is even or odd

Sample Run:

Enter a number: 4

Even

Enter a number: 5

Odd

Enter a number: 7

Odd

```
# include <iostream>
using namespace std;
int main ( )
{
    int value;
    cout << "Enter a number ";
    cin >> value;
    Switch ( value % 2)
    {
        case 0: cout << "Even integer\n"; break;
        default: cout << "Odd integer\n";
    }
    return 0;
}
```