1. (1 Point) Which of the following expressions represents a legal way of checking whether a value assigned to the `num` variable falls in the range 100 to 200?

a) `if (num >= 200 && num <= 100)`

b) `if (num >= 100 && num <= 200)`

c) `if (num >= 100 || num <= 200)`

d) `if (num >= 200 || num <= 100)`

2. (1 Point) What is the output of the following code snippet?

```java
boolean passed = false;
String someStr = "Unknown";
passed = !(passed);
if (!passed)
    someStr = "False";
if (passed)
    passed = false;
if (!passed)
    someStr = "True";
else
    someStr = "Maybe";
System.out.println(some_str);
```

a) False

b) True

c) Unknown

d) Maybe

3. (1 Point) What is the output of the following code snippet?

```java
int x = 25;
if (x < 100)
    x = x + 5;
if (x < 500)
    x = x - 2;
if (x > 10)
    x++; 
else
    x--;
System.out.println(x);
```

a) 27

b) 28

c) 29

d) 30
4. (1 Point) Assuming that a user enters 64 as his score, what is the output of the following code snippet?

```java
int score = 0;
Scanner in = new Scanner(System.in);
System.out.print("Enter your score: ");
score = in.nextInt();
if (score < 40)
    System.out.println("F");
else if (score >= 40 || score < 50)
    System.out.println("D");
else if (score >= 50 || score < 60)
    System.out.println("C");
else if (score >= 60 || score < 70)
    System.out.println("B");
else if (score >= 70 || score < 80)
    System.out.println("B+");
else
    System.out.println("A");
```

a) D  
b) C  
c) B  
d) A

5. (2 Points) What are the values of `i` and `j` after the following code fragment runs?

```java
int i = 60;
int j = 50;
int count = 0;
while (count < 5){
    i = i + i;
    i = i + 1;
    j = j - 1;
    j = j - j;
    count++;
}
System.out.println("i=" + i + ", j=" + j);
```

a) `i = 1951, j = 0`

b) `i = 1951, j = 45`

c) `i = 65, j = 1`

d) `i = 65, j = 45`
6. (2 Points) What is the output of the code snippet given below?

```java
String s = "abcde";
int i = 1;
while (i < 5){
    System.out.print(s.substring(i, i + 1));
    i++;
}
```

a) No output  
b) abcd  
c) abcde  
d) bcde

7. (2 Points) What is the output of the code fragment given below?

```java
int i = 0;
int j = 0;
while (i < 125){
    i = i + 2;
    j++;
}
System.out.println(j);
```

a) 0  
b) 62  
c) 63  
d) The code fragment displays no output because it does not compile.