Sample Exam 1 with Answers(Chapters 1 to 5)

Each question worth 20% Name _____

1) What is displayed when the following instructions are executed:

```
System.out.print("yes");
System.out.print("no")
System.out.println("maybe");
System.out.println(10/3);
System.out.println("10/3");
System.out.println(10%3);
System.out.println("bert" + 3 + 5);
System.out.println("bert" + (3 + 5));
System.out.println(3 + 5 + "bert");
System.out.println(100*10/10*10);
```

```
yes
no
maybe
3
1
bert35
bert8
8bert
1000
```

2) Write a Java program that displays `hello` ten times, each on a separate line.

```
class Q12
{
   public static void main(String[] args)
   {
       for (int i = 1; i <= 10; i++)
          System.out.println("hello");
   }
}
```

3) Write a Java program that displays the odd numbers between 1 and 999, inclusive except for the odd numbers between 223 and 333, inclusive. Use only one loop.

```
class Q13
{
   public static void main(String[] args)
   {
       for (int i = 1; i <= 99; i++)
       {
          if (i < 223 && i > 333)
             System.out.println(i);
       }
   }
}
```

4) Write a Java program that contains a `main` method and two `getGrade` methods. One version of `getGrade` has a single `int` parameter; the other has two `int` parameters. The first version of `getGrade` returns the letter grade that corresponds to the test score it is passed. Test scores and their corresponding letter grades are as follows:

```
Test Score   Letter Grade

  90-100          A
  80-89           B
  70-79           C
  65-69           D
  0-64            F
```

For example, the call of `getGrade` in the following statement should return (not display) the `char` value `'B'`:

```
char grade = getGrade(81);
```

The second version of `getGrade` is passed two test scores. It returns the grade that corresponds to the average of the two test scores it is passed. It should

1) determine the average of the two numbers it is passed;

2) call the first version of `getGrade`, passing it the average to get the corresponding letter grade;

3) return the letter grade it gets in step 2.

`main` should call `getGrade` three times, once passing it 64, once passing it 99, and once passing it both 73 and 91. For each call, `main` should display the score or scores and the corresponding letter grade obtained from `getGrade`. The display produced by `main` should look like this:

```
64 gets the grade F
99 gets the grade A
   73 and 91 gets the grade B
```

```
class Q14
{
   public static void main(String[] args)
   {
       for (int i = 1; i <= 999; i++)
       {
          if (i < 223 && i > 333)
             System.out.println(i);
       }
   }
   public static int grade(int g)
   {
      int avg;
      if (g >= 90)
          return 'A');
      else
      if (g >= 80)
         return 'B'
      else
      if (g >= 70)
         return 'B'
```

```
      else
      if (g >= 65)
         return 'B';
      else
         return 'F';
   }
   public static int grade(int g1, int g2)
   {
       int avg;
       avg = (g1+g2)/2;
       return grade(avg);
   }

}
```

5) Write a program that prompts for and then reads in a non-negative two-digit integer. You program should than call a method named `displayDigits` passing it the integer read in. `displayDigits` should display each digit of the integer it is passed on a separate line, labeled as shown below. For example, if `displayDigits` is passed 57, `displayDigits` should display

```
First digit  = 5
Second Digit = 7
```

Hint: use the `/` and `%` operators to isolate the individual digits.

```
import java.util.Scanner;
class Q15
{
   public static void main(String[] args)
   {
      int x;
      Scanner kb = new Scanner(System.in);
      System.out.println("Enter two-digit number");
      x = kb.nextInt();
      System.out.println("First digit  = " + x/10);
      System.out.println("First digit  = " + x%10);
   }
}
```