



Benazir Bhutto Shaheed Human Resources Research and Development Board (BBSHRRDB)
Mehran University of Engineering & Technology (MUET) Jamshoro
Android Development
First Monthly Test



Date: 16/05/2022

Candidate Name: _____

Candidate ID: _____

Q1. Which of the following are legal int literals?

- a) 2.3
- b) 22
- c) 5.
- d) 1.5
- e) '7'
- f) -6875309
- g) 10.0
- h) -1

Q2. What is the result of the following expression?

$1 + 2 * 3 + 7 * 2 \% 5$

- a) 2
- b) 1
- c) 5
- d) 21
- e) 11

Q3. Trace the evaluation of the following expressions, and give their resulting values. Make sure to give a value of the appropriate type (such as including a .0 at the end of a double or quotes around a String).

- a) $2 + 2 + 3 + 4$
- b) $"2 + 2 " + 3 + 4$
- c) $2 + " 2 + 3 " + 4$
- d) $3 + 4 + " 2 + 2 "$
- e) $"2 + 2 " + (3 + 4)$
- f) $“(2 + 2) ” + (3 + 4)$
- g) $"hello 34 " + 2 * 4$
- h) $2 + "(int) 2.0" + 2 * 2 + 2$
- i) $4 + 1 + 9 + "." + (-3 + 10) + 11 / 3$

Q4. Which of the following choices is the correct syntax for declaring a real number variable named 'grade' and initializing its value to 4.0?

- a) $4.0 = \text{grade};$
- b) $\text{double grade} = 4.0;$
- c) $\text{grade} = 4;$
- d) $\text{grade} = \text{double } 4.0;$
- e) $\text{int grade} : 4.0;$

Q5. What is the value of variable x after the following code executes?

```
int x = 3;  
x = x + 2;  
x = x + x;
```

- a) 10
- b) 7
- c) 5

d) 3

e) 12

Q6. What are the values of a, b, and c after the following code statements?

```
int a = 5;  
int b = 10;  
int c = b;  
a = a + 1;  
b = b - 1;  
c = c + a;  
a: _____  
b: _____  
c: _____
```

Q7. What are the values of first and second at the end of the following code?

```
int first = 8;  
int second = 19;  
first = first + second;  
second = first - second;  
first = first - second;  
first _____  
second _____
```

Q8. What are the values of i, j, and k after the following code statements?

```
int i = 2;  
int j = 3;  
int k = 4;  
int x = i + j + k;  
  
i = x - i - j;  
j = x - j - k;  
k = x - i - k;  
i: _____  
j: _____  
k: _____
```

Q9. What is the output from the following code?

```
int max;  
int min = 10;  
max = 17 - 4 / 10;  
max = max + 6;  
min = max - min;  
System.out.println(max * 2);  
System.out.println(max + min);  
System.out.println(max);  
System.out.println(min);
```

Output: _____



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Q10. What is the output of the following oddStuff method?

```
public static void oddStuff() {  
  
    int number = 4;  
  
    for (int count = 1; count <= number; count++) {  
  
        System.out.println(number);  
  
        number = number / 2;  
  
    }  
}
```

output: _____

Q11. Translate each of the following English statements into logical tests that could be used in an if/else statement. Write the appropriate logical test for each statement below. Assume that three int variables, x, y, and z, have already been declared.

- a. z is odd. _____
- b. z is not greater than y's square root. _____
- c. y is positive. _____
- d. Either x or y is even, and the other is odd. (Hint: Don't use && or ||.)

- e. z is not zero. _____
- f. y is greater in magnitude than z. _____
- g. x and z are of opposite signs. _____
- h. y is a nonnegative one-digit number. _____
- i. z is nonnegative. _____
- j. x is even _____
- k. x is closer in value to y than z is. _____

Q12. Given the following variable declarations:

```
int x = 4;  
  
int y = -3;  
  
int z = 4;
```

What are the results of the following relational expressions?

- a) $x == 4$
- b) $x == y$
- e) $x + y > 0$
- f) $x - z != 0$
- g) $y * y <= z$
- h) $y / y == 1$
- i) $x * (y + 2) > y - (y + z) * 2$

Q13. Which of the following if statement headers uses the correct syntax?

- a) if [x == 10] {
- b) if x = 10 then {
- c) if (x == y) {
- d) if (x equals 42) {
- e) if (x => y) {

Q14. Consider the following method.

```
public static void ifElseMystery1(int x, int y) {  
  
    int z = 4;  
  
    if (z <= x) { z = x + 1; } else { z = z + 9; }  
  
    if (z <= y) { y++; }  
  
    System.out.println(z + " " + y);  
  
}
```

For each call below, indicate what output is produced.

ifElseMystery1(3, 20); _____

ifElseMystery1(4, 5); _____

ifElseMystery1(5, 5); _____

ifElseMystery1(6, 10); _____

Q15. Write Java code to read an integer from the user, then print even if that number is an even number or odd otherwise. You may assume that the user types a valid integer

Write a piece of code that reads a shorthand text description of color and prints the longer equivalent.

Acceptable color names are B for Blue, G for Green, and R for Red. If the user types something other than B, G, or R,

the program should print an error message. Make your program case-insensitive so that the user can type an uppercase or lowercase letter.

Here are two example executions:

->What color do you want? R

You have chosen Red.

->What color do you want? Bork

Unknown color: Bork

Q16. How many numbers? 4

Next number --> 7

Next number --> 2

Next number --> 3

Next number --> 15

Product = 630

Q17. Write a method named repl that accepts a String and a number of repetitions as parameters and returns the String concatenated that many times. For example, the call repl("hello", 3) returns "hellohellohello". If the number of repetitions is 0 or less, an empty string is returned.

Q18. Write a method named season that takes two integers as parameters representing a month and day and that returns a String indicating the season for that month and day.

Assume that months are specified as an integer between 1 and 12 (1 for January, 2 for February, and so on) and that the day of the month is a number between 1 and 31.

Q19. If the date falls between 12/16 and 3/15, you should return "Winter". If the date falls between 3/16 and 6/15, you should return "Spring".

If the date falls between 6/16 and 9/15, you should return "Summer". And if the date falls between 9/16 and 12/15, you should return "Fall".



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Q20. Write a method called printRange that accepts two integers as arguments and prints the sequence of numbers between the two arguments, separated by spaces. Print an increasing sequence if the first argument is smaller than the second; otherwise, print a decreasing sequence. If the two numbers are the same, that number should be printed by itself. Here are some sample calls to printRange:

```
printRange(2, 7);  
  
printRange(19, 11);  
  
printRange(5, 5);
```

The output produced should be the following:

```
2 3 4 5 6 7  
  
19 18 17 16 15 14 13 12 11  
  
5
```