**Assignment 1**

**RDC 9/26/2017**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_ Class:\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1. Write the outputs of these expressions on the line below.**

(1)System.out.print(“Hot”);

System.out.println(“dog”);

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(2)System.out.println(“Hot”);

System.out.println(“dog”);

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(3)System.out.println(7 + 3);

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(4)System.out.println(7 == 2 + 5);

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( ) **2. Which of the following pairs of declarations will cause an error message?**

[a] double x = 14.7;

int y = x;

[b] double x = 14.7;

int y = (int) x;

[c] int x = 14;

double y = x;

(A) None

(B) [a] only

(C) [b] only

(D) [c] only

(E) [a] and [c] only

**3. Complete the following binary operations:**

(1) 101 - 11 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(2) 10110 + 1101 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

( ) **4. What value is stored in result if**

int result = 13 - 3 \* 6 / 4 % 3;

(A) -5

(B) 0

(C) 13

(D) -1

(E) 12

( ) **5. Suppose that addition and subtraction had higher precedence than multiplication and division. Then the expression**

2 + 3 \* 12 / 7 - 4 + 8

**would evaluate to which of the following?**

(A) -5

(B) 0

(C) 13

(D) -1

(E) 12

**6. Write the outputs of these expressions on the line below.**

(1) for (i = 1; i < 5; i++)

System.out.print(i + “ ”);

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(2) for (k = 20; k >= 15; k- -)

System.out.print(k + “ ”);

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(3) for (int j = 1; j <= 0; j++)

System.out.print(j + “ ”);

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(4) int i = 1, mult3 = 3;

while (mult3 < 20)

{

System.out.print(mult3 + “ ”);

i++;

mult3 \*= i;

}

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(5) for (int i = 1; i <= 6; i++)

{

for (int j = 1; j <= i; j++)

System.out.print(“+”);

for (int j = 1; j <= 5 - i; j++)

System.out.print(“\*”);

System.out.println();

}

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**Bonus Questions**

( ) **1. Consider this code segment:**

int x = 10, y = 0;

while (x > 5)

{

y = 3;

while (y < x)

{

y \*= 2;

if (y % x == 1)

y += x;

}

x -= 3;

}

System.out.println(x + “ ” + y);

**What will be the output after execution of this code segment?**

(A) 1 6

(B) 7 12

(C) -3 12

(D) 4 12

(E) -3 6

( ) **2. Consider this program segment:**

int newNum = 0, temp;

int num = k; //k is some predefined integer value >= 0

while (num > 10)

{

temp = num % 10;

num /= 10;

newNum = newNum \* 10 + temp;

}

System.out.print(newNum);

**Which is a true statement about the segment?**

**[a] If 100 <= num <= 1000 initially, the final value of newNum must be in the range 10 <= newNum <= 100.**

**[b] There is no initial value of num that will cause an infinite while loop.**

**[c] If num <= 10 initially, newNum will have a value of 0.**

(A) [a] only

(B) [b] only

(C) [c] only

(D) [b] and [c] only

(E) [a], [b] and [c]