**CSC 130 – Final Exam – Practice**

1. Select the right condition for the following "if" statement:

System.out.println("Enter a string that starts with 'A' or 'a':");

Scanner in = new Scanner(System.in);

String input = in.next();

if (\_\_\_\_\_\_\_\_\_\_)

{

System.out.println("Input starts with A or a");

} else

{

System.out.println("Input does not start with A or a");

}

A) input == "A" || input == "a"

B) input.charAt(0) == 'A' || input.charAt(0) == 'a'

C) input[0] == 'A' || input[0] == 'a'

D) input.equals(“A”) || input.equals(“a”)

2. Assuming that the user provides 800 as input, what is the output of the following code snippet?

Scanner in = new Scanner(System.in);

System.out.println("Please enter a number: ");

if (in.hasNext())

{

if ((in.next().compareTo("1000") > 0))

{

System.out.println("Number is greater than 1000");

}

else

{

System.out.println("Number is not greater than 1000");

}

}

else

{

System.out.println("Invalid Number!");

}

A) Number is greater than 1000

B) Number is not greater than 1000

C) Invalid Number!

D) There is no output due to run-time error.

3. How do you fix this code snippet to make it print out the sum when the user enters Q?

System.out.print("Enter a value, Q to quit: ");

double sum = 0;

Scanner in = new Scanner(System.in);

boolean hasData = true;

do

{

double value = in.nextDouble();

sum = sum + value;

System.out.print("Enter a value, Q to quit: ");

}

while (in.hasNext());

System.out.println("sum " + sum);

A) while (in.hasData());

B) while (!in.hasEnded());

C) while (in.hasNextDouble());

D) while (hasData);

4. Which code snippet produces the sum of the first *n* even numbers? (0 is not considered an even number.)

A) int sum = 0;

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

{

if (i % 2 == 0)

{

sum = sum + i;

}

}

B) int sum = 0;

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

{

sum = sum + i \* 2;

}

C) int sum = 0;

for (int i = 0; i < n; i++)

{

if (i % 2 == 0)

{

sum = sum + i;

}

}

D) int sum;

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

{

sum = sum + i \* 2;

5. What does the following code snippet display?

char ch1 = '\ u0000';

char ch2 = '\ uffff';

for (int i = 0; i < 1000; i++)

{

if (i % 50 == 0)

{

System.out.println();

}

System.out.print((char)(ch1 + Math.random() \* (ch2 - ch1 + 1)));

}

A) It displays random Unicode characters.

B) It displays random ASCII characters.

C) Nothing because it has compilation error.

D) It displays the hexadecimal characters between '0' and 'F'.

6. What is the output if the method call is testmyval(6) in the following code snippet?

public static void testmyval(int nval)

{

if (nval > 0)

{

testmyval(nval - 2);

}

System.out.println(nval + " ");

}

A) 0 2 4 6

B) 0 0 0 0

C) 6 6 6 6

D) 6 4 2 0

7. What is the output of the following code snippet?

public static int fun(int x)

{

int ret\_value = 0;

if (x > 5)

{

ret\_value = x;

}

else

{

ret\_value = fun(2 \* x);

}

return ret\_value;

}

public static void main(String[] args)

{

System.out.println("fun(2) = " + fun(2));

}

A) fun(2) = 4

B) fun(2) = 8

C) fun(2) = 16

D) fun(2) = 32

8. On executing the following code snippet, what is the output?

public static void main(String[] args)

{

int gvar = 0;

gvar = gvar + 10;

if (gvar > 0)

{

int lvar = gvar + 1;

}

System.out.println(lvar);

}

A) 1

B) 10

C) 11

D) No output due to compilation error

9. Consider the following code snippet. What does the array contain at the end of the program?

public static fillWithRandomNumbers(double[] values)

{

double[] numbers = new double[values.length];

for (int i = 0; i < numbers.length; i++)

{

numbers[i] = Math.random();

}

values = numbers;

}

public static void main(String[] args)

{

double[] num = new double[20];

fillWithRandomNumbers(num);

}

A) 20 random numbers

B) Undefined data due to compilation error

C) 20 zeros because array num is not changed by method

D) Array index bound error

10. Consider the following code snippet:

ArrayList<Integer> num1 = new ArrayList<Integer>();

ArrayList<Integer> num2 = new ArrayList<Integer>();

...

int cnt = 0;

for (int i = 0; i < num1.size() && i < num2.size(); i++)

{

if(num1.get(i) == num2.get(i))

{

cnt++;

}

}

Which one of the following descriptions is correct for the given code snippet?

A) The code snippet finds the highest value out of the two array lists.

B) The code snippet finds the lowest value out of the two array lists.

C) The code snippet compares the values of two array lists and stores the count of total matches found.

D) The code snippet adds the values of the two array lists.

11. What is the output of the following statements?

ArrayList<String> cityList = new ArrayList<String>();

cityList.add("London");

cityList.add("New York");

cityList.add("Paris");

cityList.add("Toronto");

cityList.add("Hong Kong");

cityList.add("Singapore");

System.out.print(cityList.size());

System.out.print(" " + cityList.contains("Toronto"));

System.out.print(" " + cityList.indexOf("New York"));

System.out.println(" " + cityList.isEmpty());

A) 5 true 1 false

B) 6 true 2 false

C) 5 false 1 false

D) 6 true 1 false

11. Consider the following code snippet:

int[][] arr =

{

{ 1, 2, 3, 0 },

{ 4, 5, 6, 0 },

{ 0, 0, 0, 0 }

};

int[][] arr2 = arr;

System.out.println(arr2[2][1] + arr2[1][2]);

What is the output of the given code snippet on execution?

A) 5

B) 6

C) 7

D) 9

12. How many elements can be stored in an array of dimension 5 by 6?

A) 5

B) 6

C) 11

D) 30

13. Consider the following code snippet:

int[][] arr =

{

{ 13, 23, 33 },

{ 14, 24, 34 }

};

Identify the appropriate statement to display the value 24 from the given array?

A) System.out.println(arr[1][2]);

B) System.out.println(arr[2][2]);

C) System.out.println(arr[1][1]);

D) System.out.println(arr[2][1]);

14. Consider the following method. Select the statement that reveals the logic error in the method.

public static double minimum(double[] data)

{

double smallest = 0;

for (int i = 1; i < data.length; i++)

{

if (data[i] < smallest)

{

smallest = data[i];

}

}

return smallest;

}

A) double m = minimum(new double[] { 1.2, 3.5, 6.6, 2.4 });

B) double m = minimum(new double[] { 1.2, 23.5, 16.6, 23.4 });

C) double m = minimum(new double[] { 10.2, 3.5, 62.6, 21.4 });

D) double m = minimum(new double[] { 12.2, 31.5, -6.6, 2.4 });

15. Methods that are invoked on objects are called \_\_\_\_\_\_\_\_.

A) object methods

B) runtime methods

C) instance methods

D) simple methods