

Started on	Thursday, 17 October 2024, 8:36 PM
State	Finished
Completed on	Thursday, 17 October 2024, 9:02 PM
Time taken	26 mins 22 secs
Marks	13.00/20.00
Grade	65.00 out of 100.00

Question

1

Complete

Mark 1.00 out of 1.00

What is true about the following code? (Choose all that apply)

```
public class Bear {  
    protected void finalize() {  
        System.out.println("Roar!");  
    }  
    public static void main(String[] args) {  
        Bear bear = new Bear();  
        bear = null;  
        System.gc();  
    }  
}
```

Select one or more:

- ☐ a. **finalize() is guaranteed not to be called.**
- ☒ b. **finalize() might or might not be called**
- ☐ c. **The code does not compile.**
- ☐ d. **finalize() is guaranteed to be called.**
- ☒ e. **Garbage collection might or might not run.**
- ☐ f. **Garbage collection is guaranteed to run.**
- ☐ g. **Garbage collection is guaranteed not to run.**

Question

2

Complete

Mark 0.00 out of 1.00

What is the output of the following code snippet?

```
3: int x = 1, y = 15;  
4: while x < 10  
5: y—;  
6: x++;  
7: System.out.println(x+", "+y);
```

Select one or more:

- ☐ a. 11, 5
- ☐ b. The code will not compile because of line 3.
- ☐ c. The code will not compile because of line 4.
- ☐ d. The code contains an infinite loop and does not terminate.
- ☒ e. 10, 6
- ☐ f. 10, 5

Question

3

Complete

Mark 0.00 out of 1.00

What is the result of the following code? (Choose all that apply)

```
13: String a = "";  
14: a += 2;  
15: a += 'c';  
16: a += false;  
17: if ( a == "2cfalse") System.out.println("==");  
18: if ( a.equals("2cfalse")) System.out.println("equals");
```

Select one or more:

- ☒ a. ==
- ☐ b. Compile error on line 14.
- ☐ c. Compile error on line 16.
- ☐ d. Compile error on line 15.
- ☒ e. equals
- ☐ f. An exception is thrown.
- ☐ g. Compile error on another line.

Question

4

Complete

Mark 1.00 out of 1.00

What is the result of the following statements?

```
1: public class Test {  
2: public void print(byte x) {  
3: System.out.print("byte");  
4: }  
5: public void print(int x) {  
6: System.out.print("int");  
7: }  
8: public void print(float x) {  
9: System.out.print("float");  
10: }  
11: public void print(Object x) {  
12: System.out.print("Object");  
13: }  
14: public static void main(String[] args) {  
15: Test t = new Test();  
16: short s = 123;  
17: t.print(s);  
18: t.print(true);  
19: t.print(6.789);  
20: }  
21: }
```

Select one or more:

- ☐ a. **intObjectfloat**
- ☐ b. **bytefloatObject**
- ☐ c. **intfloatObject**
- ☒ d. **intObjectObject**
- ☐ e. **byteObjectfloat**
- ☐ f. **byteObjectObject**

Question

5

Complete

Mark 1.00 out of 1.00

What is the output of the following code?

```
1: class Arthropod
2: public void printName(double input) { System.out
   .print("Arthropod"); }
3: }
4: public class Spider extends Arthropod {
5: public void printName(int input) { System.out.print("Spider"); }
6: public static void main(String[] args) {
7: Spider spider = new Spider();
8: spider.printName(4);
9: spider.printName(9.0);
10: }
11: }
```

Select one or more:

- ☒ **a. SpiderArthropod**
- ☐ **b. The code will not compile because of line 9.**
- ☐ **c. The code will not compile because of line 5.**
- ☐ **d. ArthropodSpider**
- ☐ **e. ArthropodArthropod**
- ☐ **f. SpiderSpider**

Question

6

Complete

Mark 0.00 out of 1.00

What is the output of the following?

```
Stream<String> stream = Stream.iterate("", (s) -> s + "1");  
System.out.println(stream.limit(2).map(x -> x + "2"));
```

Select one or more:

- ☐ a. An exception is thrown.
- ☐ b. The code hangs.
- ☒ c. 12112
- ☐ d. 212112
- ☐ e. The code does not compile.
- ☐ f. 212
- ☐ g. java.util.stream.ReferencePipeline\$3@4517d9a3

Question

7

Complete

Mark 1.00 out of 1.00

What is the output of the following program?

```
1: public class Cat {  
2: public String name;  
3: public void parseName() {  
4: System.out.print("1");  
5: try {  
6: System.out.print("2");  
7: int x = Integer.parseInt(name);  
8: System.out.print("3");  
9: } catch (NullPointerException e) {  
10: System.out.print("4");  
11: }  
12: System.out.print("5");  
13: }  
14: public static void main(String[] args) {  
15: Cat leo = new Cat();  
16: leo.name = "Leo";  
17: leo.parseName();  
18: System.out.print("6");  
19: }  
20: }
```

Select one or more:

- ☐ a. 124, followed by a stack trace for a NumberFormatException
- ☐ b. An uncaught exception is thrown.
- ☐ c. The code does not compile.
- ☐ d. 12456
- ☒ e. 12, followed by a stack trace for a NumberFormatException
- ☐ f. 1256, followed by a stack trace for a NumberFormatException

Question

8

Complete

Mark 0.00 out of 1.00

Which terminal operations on the Stream class are reductions? (Choose all that apply.)

Select one or more:

- ☐ a. map()
- ☐ b. peek()
- ☒ c. collect()
- ☐ d. findFirst()
- ☒ e. count()
- ☒ f. sum()

Question

9

Complete

Mark 0.00 out of 1.00

Which of the following can fill in the blank so that the code prints out false? (Choose all that apply.)

```
Stream<String> s = Stream.generate(() -> "meow");  
boolean match = s._____(String::isEmpty);  
System.out.println(match);
```

Select one or more:

- ☒ a. noneMatch
- ☐ b. findAny
- ☐ c. allMatch
- ☐ d. None of the above
- ☐ e. findFirst
- ☒ f. anyMatch

Question

10

Complete

Mark 0.00 out of 1.00

Which of the following is true?

4: `Stream<Integer> s = Stream.of(1);`

5: `IntStream is = s.mapToInt(x -> x);`

6: `DoubleStream ds = s.mapToDouble(x -> x);`

7: `Stream<Integer> s2 = ds.mapToInt(x -> x);`

8: `s2.forEach(System.out::print);`

Select one or more:

- ☒ a. Line 6 does not compile.
- ☐ b. Line 4 does not compile.
- ☐ c. The code compiles and prints 1.
- ☐ d. Line 8 does not compile.
- ☐ e. The code throws an exception.
- ☐ f. Line 7 does not compile.
- ☐ g. Line 5 does not compile.

Question

11

Complete

Mark 0.00 out of 1.00

What is the postfix expression for the infix expression $A * (B + C) / D$?

Select one or more:

- ☒ a. `ABC+D/`
- ☐ b. `AB+CD/`
- ☐ c. `AB+C/D`
- ☒ d. `ABC+D/`

Question

12

Complete

Mark 1.00 out of 1.00

In a Binary Search Tree (BST), the minimum element is found by:

Select one or more:

- ☐ a. Performing an in-order traversal
- ☐ b. Traversing the right subtree
- ☐ c. Performing a pre-order traversal
- ☒ d. Traversing the left subtree

Question 13

Complete

Mark 1.00 out of 1.00

Which of the following is true about the root of a Binary Search Tree (BST)?

Select one or more:

- ☒ a. It has no parent.
- ☐ b. It has at most two children.
- ☐ c. It is always a leaf node.
- ☐ d. It is always the smallest element in the tree.

Question 14

Complete

Mark 1.00 out of 1.00

What is the purpose of balancing a Binary Search Tree (BST)?

Select one or more:

- ☒ a. To minimize the tree's height and improve search, insertion, and deletion times
- ☐ b. To reduce memory usage
- ☐ c. To simplify the structure of the tree
- ☐ d. To ensure all nodes have two children

Question 15

Complete

Mark 1.00 out of 1.00

Sort(arr[]):

n = length of arr

for i from 0 to n - 1:

 minIndex = i

 for j from i + 1 to n - 1:

 if arr[j] < arr[minIndex]:

 minIndex = j

 if minIndex != i:

 Swap(arr[i], arr[minIndex])

The above code talk about which sorting technique?

Select one or more:

- ☐ a. Bubble Sort
- ☐ b. Quick Sort
- ☒ c. Selection Sort
- ☐ d. Merge Sort

Question 16

Complete

Mark 1.00 out of
1.00

Mr A, Miss B, Mr C and Miss D are sitting around a table and discussing their trades. Mr A sits opposite to chef. Miss B sits right to the business man. The software engineer is on the left of the tailor. Miss D sits opposite Mr C. What are the trades of A and B?

Select one or more:

- ☐ a. Businessman and chef
- ☐ b. Tailor and businessman
- ☐ c. Software engineer and chef
- ☒ d. Tailor and chef

Question 17

Complete

Mark 1.00 out of
1.00

If in a certain code language, '324' means 'Light is bright', '629' means 'Girl is beautiful' and '4758' means 'I prefer bright clothes', which digit means 'Light' in that language?

Select one or more:

- ☐ a. 4
- ☐ b. 7
- ☐ c. 2
- ☒ d. 3

Question 18

Complete

Mark 1.00 out of
1.00

A shopkeeper marks the prices at 20% higher than the original price. Due to increase in demand, he further increases the price by 15%. How much percent profit will he get?

Select one or more:

- ☐ a. 44%
- ☐ b. 40%
- ☒ c. 38%
- ☐ d. 35%

Question 19

Complete

Mark 1.00 out of
1.00

Find the wrong number in the series: 2, 5, 10, 50, 500, 5000

Select one or more:

- ☒ a. 5000
- ☐ b. 5
- ☐ c. 50
- ☐ d. 10

Question 20

Complete

Mark 1.00 out of
1.00

Pointing to a photograph, a man said, "I have no brother or sister but that man's father is my father's son." Whose photograph was it?

Select one or more:

- ☐ a. His own
- ☒ b. His son's
- ☐ c. His father's
- ☐ d. His nephew's