CSA C.9 Practice

Started: Dec 6 at 1:14pm

Quiz Instructions

2 attempts

Highest score is counted

Question 1 — 100 pts

The only limitation that static methods have is _____.

- (●) they cannot refer to nonstatic members of the class
- ( ) they can only be called from static members of the class
- ( ) they must be declared outside of the class
- ( ) they can refer only to nonstatic members of the class

Question 2 — 100 pts

A class that is defined inside another class is called a(n) _____.

- ( ) enumerated class

- (●) nested class
- ( ) helper class
- ( ) inner class

Question 3

100 pts

Static methods can only operate on _____ fields.

- ( ) local
- ( ) instance
- (●) static
- ( ) global

Question 4

100 pts

Which of the following is ***not*** true about static methods?

- ( ) It is not necessary for an instance of the class to be created to execute a static method.
- (●) They are called from an instance of the class.
- ( ) They are often used to create utility classes that perform operations on data but have no need to collect and store data.

- They are called by placing the key word `static` after the access specifier in the method header.

Question 5

100 pts

When a reference variable is passed as an argument to a method _____.

- the method becomes a static method
- a copy of the variable's value is passed into the method's parameter
- the program terminates
- the method has access to the object that the variable references

Question 6

100 pts

When a method's return type is a class, what is actually returned to the calling program?

- the values in the object that the method accessed
- nothing - the return type is simply for documentation in this situation
- a reference to an object of that class
- an object of that class

Question 7

100 pts

A static field is created by placing the key word `static` _____.

- (•) after the access specifier and before the field's data type
- ( ) after the access specifier and the field's data type
- ( ) in brackets, before the field's data type
- ( ) after the field name

Question 8

100 pts

When a field is declared `static` there will be _____.

- ( ) a copy of the field for each method in the class
- ( ) a copy of the field in each class object
- ( ) two reference copies of the field for each method in the class
- (•) only one copy of the field in memory

Question 9

100 pts

If the `this` variable is used to call a constructor, _____.

- nothing will happen
- a compiler error will result if it ***is*** the first statement of the constructor
- a compiler error will result if it ***is not*** the first statement of the constructor
- the `this` variable cannot be used as a constructor call

Question 10

100 pts

To compare two objects in a class, _____.

- use the == operator (for example, `object1 == object2`)
- write a method to do a byte-by-byte compare of the two objects
- write an `equals` method that will make a field by field compare of the two objects
- This cannot be done since objects consist of several fields.

Question 11

100 pts

If you attempt to perform an operation with a null reference variable _____.

- the resulting operation will always be zero
- (•) the results will be unpredictable
- the program will terminate/crash
- Java will create an object to reference the variable

Question 12

100 pts

If you have defined a class, `SavingsAccount`, with a public `static` method, `getNumberOfAccounts`, and created a `SavingsAccount` object referenced by the variable `account20`, which of the following will call the `getNumberOfAccounts` method?

- (•) `SavingsAccount.getNumberOfAccounts();`
- `getNumberOfAccounts();`
- `account20.getNumberOfAccounts();`
- `SavingsAccount.account20.getNumberOfAccounts();`

Question 13

100 pts

If you have defined a class, `SavingsAccount`, with a public `static` data member named `numberOfAccounts`, and created a `SavingsAccount` object referenced by the variable `account20`, which of the following will assign `numberOfAccounts` to `numAccounts`?

- (●) `numAccounts = SavingsAccount.numberOfAccounts;`
- ( ) `numAccounts = account20.numAccounts;`
- ( ) `numAccounts = numOfAccounts;`
- ( ) `numAccounts = account20;`

Question 14

100 pts

Assume the class `BankAccount` has been created and the following statement correctly creates an instance of the class.

```
BankAccount account = new BankAccount(5000.00);
```

What is true about the following statement?

```
System.out.println(account);
```

- ( ) The method will display unreadable binary data on the screen.
- ( ) A runtime error will occur.
- (●) The `account` object's `toString` method will be implicitly called.
- ( ) A compiler error will occur.

Question 15

100 pts

If the following is from the method section of a UML diagram, which of the statements below is true?

```
+ equals(object2:Stock) : boolean
```

- This is a public method that returns a reference to a `String` object.
- This is a private method that returns a `boolean` value.
- This is a private method that receives two objects from the `Stock` class and returns a `boolean` value.
- (selected) This is a public method that accepts a `Stock` object as its argument and returns a `boolean` value.

Question 16

100 pts

Given the following method header, what will be returned from the method?

```
public Rectangle getRectangle()
```

- a graph of a rectangle
- (selected) an object of the class `Rectangle`
- the address of an object of the `Rectangle` class
- the values stored in the data members of the `Rectangle` object

Question 17 — 100 pts

The key word `this` is the name of a reference variable that an object can use to refer to itself.

- (●) True
- ( ) False

Question 18 — 100 pts

An instance of a class does not have to exist in order for values to be stored in a class's static fields.

- (●) True
- ( ) False

Question 19 — 100 pts

A class's static methods do not operate on the fields that belong to any instance of the class.

- ( ) False
- (●) True

Question 20

100 pts

If you write a `toString` method for a class, Java will automatically call the method any time you concatenate an object of the class with a string.

- (•) True
- ( ) False

Question 21

100 pts

When an object is passed as an argument, it is actually a reference to the object that is passed.

- (•) True
- ( ) False

Question 22

100 pts

Both instance fields and instance methods are associated with a specific instance of a class, and they cannot be used until an instance of the class is created.

- ○ False
- ◉ True

Question 23 — 100 pts

A single copy of a class's static field is shared by all instances of the class.

- ◉ True
- ○ False

Question 24 — 100 pts

When an object reference is passed to a method, the method may change the values in the object.

- ◉ True
- ○ False

Question 25 — 100 pts

If you write a `toString` method to display the contents of an object, `object1`, for a class, `Class1`, then the following two statements are equivalent:

```
System.out.println(object1);
System.out.println(object1.toString());
```

- ○ False
- ◉ True

No new data to save. Last checked at 11:46pm

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