

CSC 20 Midterm Exam(Spring 2018) redo

1. True or False Questions

1. False, String is not a primitive data, since primitive data type are used to hold small amount of memory to represent a single item which are represented by bits, like int. String on the other hand is more of a reference data type who are subtype of an Object
2. False, "=" doesn't have the highest precedence, the highest precedence would be "(" or "["
3. False, Public static main(String[] args) is the correct main method of java class, it should be Public static void main(String[] args) as it doesn't need a return value
4. True, InsertBefore is faster when comparing the Linked implementation with the array implementation is true since it can keep both the current and the previous variable and just insert in between
5. Is False, since inheritance is a mechanism wherein a newclass is derived from an existing class, in java, classes may inherit or acquire the properties and methods of other classes.
6. A class inherits from some other classes, it shouldn't be able to override all methods of its parent class to make it better, since a parent class cant be modified in that current inherit class so its false.
7. It is false since a Garabage collection in the context of java, is the process of reclaiming the runtime unused memory automatically. In other words, it is a way to destroy the unused objects, it doesn't check the output instead the objects
8. It is false, using the given code segment:

```
....
Int i = 0;
i = i++ + i;
System.out.println("I =" + i);
```

Expected output is: "I = 2" is wrong since i=i++ + I means that we increase I by one first then add the given variable I to it again which is 1 + 0 which equals 1;

9. It is false, using the given code segment:

```
....
Rectangle r1 = new Rectangle();
R1.setColor(Color.blue);
Rectangle r2 = r1;
R2.setColor(Color.red);
```

The color r1 and r2(in this order) are Color.blue Color.red. Which is wrong. The outcome is Color.blue Color.blue since r1 color is blue, so when it called it is Color.Blue, since r2 is set to equal r1 so it shold be color.blue. Since r2 wasn't initialize, it would be able to get its own color red so it is still Color.blue

10. Is False, since to instantiate a class in java means to create a specific class, which

Can also mean creating an object. So to create a instantiate MyClass you would need to write
`MyClass myClass = new MyClass();`

11. It is false since in a Java program, first you would have to declare a package declaration then you can use the import statement, lastly you call the class declaration. Reason why you got to first call a package first is due to avoid name conflicts and to control access of the class, interface, and enumeration etc. Then you call in import statement, which allow you to specify classes from other packages that can be referenced without qualifying them with their package. Then Lastly you declare the Class name.
12. Is false, since an overload method must have a different name, parameter type and the order of its parameter, also the return type can be the same.
13. Its is false, using the given statement:

```
.....  
String s1 = "Hello";  
String s2 = new String(s1);  
System.out.println(s1==s2);
```

Answer: True, is false since s1 is creating a String literal, while s2 is creating a new String object, so which mean that both of there wouldn't equal each other

14. Its is false, since a sub class cant override a parent methods and its field of attribute. Although you can refine a class by adding variable and methods, you cant modify the parent class using only the subclass.
15. Is False since extends keywords cant be used in subclass to call the constructor of superclass. Instead the keyword would be super, extend on the other hand
16. Its is False since all classes in Java aren't inherited from java.lang.Class, instead it is inherited from java.lang.Object. Object is the root of the class hierarchy
17. B is the sub class of A. C is a sub class of B. This statement is legal: `Cc=new A();` Is false since A is the superclass, if b is the sub class of a then b is the inherit class of A which mean A is the parent class of it. A cant be change from c since it's a sub class of b
18. The expression "`java`" + 1 +2 +3 is evaluates to Java 6 is false since the expression "`+ 1 + 2 +3`" does add with each other while its is outputted like that. It just print itself out so the actual answer is Java123.
19. It is false since abstract data type is a behavior that have already been define but not implemented. So you cant can't the abstract data since it is something that cant be change
20. It is true, in the problem "`x=(a>b)?a:b`"; with a = 18 and b = 27 is given, then x = 27. Since by plugging in what is given which was the a and b, we try to find x. First we look at the parenthesis, and we compare the two number to see if its true or false, then since it is false we look at the "`? a:b`" which basically mean if its true then it's a, if its false then its b. Since its false then x = b which is 27.