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Score: 17 / 24 (70.83%)

CS3 Boolean, Bitwise, and Ternary Test

MULTIPLE CHOICE

B 1. What is the output of the following code assuming that *p* is *true* and *q* is *false*?

```
boolean bb = !p || q;
System.out.println(bb);
```

a. true
b. false
c. Illegal, won't compile
d. Need more information
e. None of these

Points: 1 / 1

C 2. What is output by:

```
System.out.println(8<<3);
```

a. 0
b. 1
c. 64
d. 24
e. None of these

Points: 1 / 1

D 3. What is output by the following code?

```
int p = 9;
int q = -1;
boolean sim = (q-- > 5) & (p++ > 22)
System.out.println(p + "   " + sim);
```

a. 9 true
b. 10 true
c. 9 false
d. 10 false
e. None of these

Points: 1 / 1

A 4. Show how to convert *int i* into its wrapper class equivalent.

a. Integer iw = new Integer(i);
b. Integer iw = i;
c. Integer iw = new WrapperClass(i)
d. More than one of these
e. None of these

Points: 0 / 1

B 5. Do a bitwise **AND** between the following two binary numbers.

1001101
1000111

a. 1000101
b. 1001111
c. 1000010
d. 1000001
e. None of these

Points: 0 / 1

C 6. What gets printed?

```
  …
Calc myObj = new Calc( );
System.out.println( myObj.adjust(117.8) );
  …

public class Calc
{
    public static int adjust(double d)
    {
        d *= 2;
        Double dw = d;
        return dw;
    }
}
```

a. 235
b. 234
c. 235.6
d. Throws an exception
e. None of these

Points: 0 / 1

B 7. What are the two possible values for a *boolean* type variable?

a. yes, no
b. true, false
c. always, never
d. nein, ya
e. None of these

Points: 1 / 1

B 8. Show how to convert *boolean b* into its wrapper class equivalent using the autoboxing feature.

a. Boolean bw = new b;
b. Boolean bw = new Boolean(b);
c. Boolean bw = b;
d. Boolean bw = b.wrapperClass( );
e. None of these

Points: 0 / 1

A 9. Which is the most recommended, use of "*if – else*", or use of the "selection operator"?

a. *if-else*
b. selection operator
c. Neither. They are both outdated
d. The two are not interchangeable
e. None of these

Points: 1 / 1

D 10. What is output by:

```
System.out.println(64>>2);
```

a. 128
b. 256
c. 32
d. 16
e. None of these

Points: 1 / 1

B 11. Show how to convert *Character cw* into its *char* equivalent using auto-unboxing.

a. Character cw = new Character(ch);
b. char ch = cw;
c. Character cw = Character(ch);
d. char ch cw.unwrap( );
e. None of these

Points: 1 / 1

C 12. What is the value of *w*?

```
 int xz[] ={6, 0, 3, 3, 5, -1, 12, 7, 3, 3};
 int w = theMethod(xz);

public static int theMethod (int k[] )
{
    int p=0;
   for(int j =0; j < k.length; j++)
     if (k[j] >= 0  &&  k[j]< k.length  &&  k[k[j]]
                                                 = =3)
           p++;
    return p;
}
```

a. Exception is thrown
b. 3
c. 4
d. 5
e. None of these

Points: 1 / 1

C 13. What is printed when we make the call *getAsum("22222")*?

```
public static void getAsum(String a)
{
        int total=0;
        Integer p1, p2;
        for(int j = a.length( ) - 1; j > 1;j--)
        {
            p1 = j-1;
            p2 = new Integer(j);
            total+=j;
        }
        System.out.println(total);
}
```

a. 9
b. 7
c. 5
d. 2
e. None of these

Points: 0 / 1

D 14. Rewrite the following using an *if-else* structure:

```
double d = (b >= 37)? Math.pow(3.2,3.55) : 37.2;
```

a.
```
double d;
if(b >=37)
{
        d = Math.pow(3.2, 3.55);
}
else
{
        d = 37.2;
}
```

b.
```
double d;
if(b >=37)
{
        d = 37.2;
}
else
{
        d = Math.pow(3.2, 3.55);
}
```

c.
```
double d = 37.2;
if(b >=37)
{
        d = Math.pow(3.2, 3.55);
}
```

d. More than one of these

e. None of these

Points: 0 / 1

A 15. Which has higher precedence, & or | ?

a. &
b. |
c. They are of equal precedance and would therefore be executed in a left-to-right order
d. Precedance does not apply
e. Depends on the context of the problem

Points: 1 / 1

B 16. What will be the value of *ht* after the method call, *ht = nerdMethod(false, false);*?

```
public static double nerdMethod(boolean x, boolean y)
{
    double coneHeight;
    coneHeight = !(x&&y) ? 18.3 : 5 * Math.PI;
    return coneHeight;
}
```

a. 15.70796327
b. 18.3
c. 3.141592654
d. *nerdMethod* is *static* and can't be called without creating an object
e. false

Points: 1 / 1

```
public class Tire
{
        …
    public boolean vogue(boolean p, boolean q)
    {
        boolean perk;
        perk = !p || q ? p&&q : p||q;
        return perk;
     }
        …
}
```

C 17. What is returned by the method call, *vogue(true, false)*? (Refer to the code above.)

a. 0
b. *false*
c. *true*
d. Nothing
e. None of these

Points: 1 / 1

D 18. What symbol indicates a bitwise **OR**?

a. &&
b. &
c. ||
d. |
e. ^

Points: 1 / 1

E 19. If *boolean p* is *false* what is !*p*?

a. false
b. Illegal
c. Not enough information
d. This is a stupid question
e. true

Points: 1 / 1

D 20. What is the purpose of wrapper classes?

a. To produce greater accuracy
b. To increase speed
c. To allow for leap year
d. To convert primitive type variables into objects containing the equivalent information
e. None of these

Points: 1 / 1

A 21. What is the operator used to indicate Boolean **OR**?

a. ||
b. &&
c. &
d. |
e. ^

Points: 1 / 1

A 22. Show how to convert *int i* into a binary *String*.

a. String s = Integer.toBinaryString(i);
b. String s = Integer.toBinString(i);
c. String s = Integer.toBinString(i, 2);
d. String s = toBinaryString(i, 2);
e. None of these

Points: 1 / 1

B 23. Rewrite the following using the selection operator:

```
String s;
if(bol)
{
        s = “global positioning system”;
}
else
{
        s = “gps”;
}
```

a. String s = bol? “gps” : “global positioning system”;
b. String s = = bol? “global positioning system” : “gps”;
c. String s = bol: “global positioning system” ? “gps”;
d. String s = bol? “global positioning system” : “gps”;
e. None of these

Points: 0 / 1

C 24. What is output by the following code?

```
System.out.println(~103 > 0);
```

a. -103
b. *true*
c. *false*
d. !103
e. None of these

Points: 1 / 1