# **Name \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Introduction to Computer Science Using C++**

## **Chapter 7 + 8 Test – Decision Making and Looping**

### **True/False**

T F 1. && and ⎜⎟ are relational operators.

T F 2. An integer value of 1 represents true in C++.

T F 3. Selection structures are how C++ programs make decisions.

T F 4. The break keyword causes a program to end.

T F 5. The if/else structure will execute one of two different blocks of code.

T F 6. Another name for an if/else structure is a two-way selection structure.

T F 7. The logical operator is the operator that allows you to work with the parts inside a number or character.

T F 8. The triangle is the symbol in a flowchart that shows decision-making.

T F 9. You can use float or string variables in the control expression of a switch statement.

T F 10. The logical operator **⎢⎟** means OR?

### **Multiple Choice**

1. Which of the following statements assigns a 1 to a variable named vacation\_to\_consider when the cost\_of\_vacation is less than or equal to budget\_for\_vacation and SCUBA\_available is true?
2. vacation\_to\_consider = ((cost\_of\_vacation <= budget\_for\_vacation) && SCUBA\_available)
3. vacation\_to\_consider = ((cost\_of\_vacation ⏐⏐ budget\_for\_vacation) && SCUBA\_available)
4. vacation\_to\_consider = cost\_of\_vacation && budget\_for\_vacation == SCUBA\_available
5. vacation\_to\_consider = ((cost\_of\_vacation && budget\_for\_vacation) ⏐⏐ SCUBA\_available)
6. Which of the following selection structures is a one-way selection structure?
7. the if structure
8. the if-else structure
9. nested if-else structure
10. the switch structure
11. What types of values can the switch structure use in its control expressions?
12. integers only
13. characters only
14. integers and characters only
15. any type of value is legal
16. The case keyword is used only as part of
17. if structures
18. if-else structures
19. nested if-else structures
20. switch structures
21. The expression **((4 < 5) && (6 >= 6))** returns the value
22. 0
23. 1
24. 2
25. 3
26. What are representative of the true and false values in C++?
27. 1, 2
28. 2, 1
29. 1, 100
30. 1, 0

17. What is the difference between the = operator and the == operator?

1. The = operator is used to assign a value to a variable and the == operator is used to test two variables to determine if they are equal.
2. The = operator is used to copy one string to another and the == operator tests two strings to see if they are equal.
3. The == operator is used to assign a value to a variable and the = operator is used to test two variables to see if they are equal.
4. The == operator is used to copy one string to another and the = operator is used to test two variables to see if they are equal.

18. The system that allows more than simply true or false is also called:

1. decision logic
2. fuzzy logic
3. smart logic
4. relational logic
5. What do selection structures do?
6. They release control of the program to the operating system.
7. They perform certain statements repeatedly.
8. They execute one statement after another.
9. They allow a program to follow different paths based on a certain set of circumstances.
10. When would you want to use the if/else structure instead of the if structure?
11. When you want to perform either action A or action B, but not both.
12. When you want to perform action A sometimes and action B all of the time.
13. When action B is a slight modification of action A.
14. When you want to perform both action A and action B.

#### **True/False**

T F 21. Each loop through a group of statements is called an *itemization*.

T F 22. A for loop uses a counter variable.

T F 23. The control expression is a while loop is tested at the beginning of the loop.

T F 24. Only for loops can be nested.

T F 25. To include more than one statement in a loop, the statements must be indented to appear within the loop.

T F 26. More than one for statements per program is allowed.

T F 27. When you want to go through the loop at least one time you would use a do while loop rather than the other two types of loops.

T F 28. The main difference between a for loop and a while loop is that the while loop always executes once.

T F 29. Loops are called incremental structures.

T F 30. A while loop will stop when the control expression evaluates to false.

#### **Multiple Choice**

31.Which of the following is not one of the three categories of structures?

1. sequence structures
2. decision structures
3. iteration structures

32.Which of the following structures would you use to create a loop that tests a control expression at the end?

1. for loop
2. while loop
3. do while loop

33.Which of the following statements is used to end a loop before the conditions of the control expression are met?

1. halt
2. break
3. stop

34.A continue statement causes execution to skip to

1. the first statement after the loop
2. the statement following the continue statement
3. the next iteration of the loop

35.In a group of nested loops, which loop is executed more times?

1. the outermost loop
2. the innermost loop
3. all loops are executed the same number of times

36.Each pass through a loop is called a/an:

1. traversal
2. enumeration
3. iteration

37.What are the three expressions associated with the for loop?

1. initialize, control, step
2. initialize, control, increment
3. set, loop, increment

38.If there is more than one statement in the block of a for loop, what characters need to be placed at the beginning and ending of the loop?

1. Braces {}
2. Parentheses ()
3. Brackets []

39.Which for loop parameter gives a value to a variable at the beginning of the loop?

1. step expression
2. increment expression
3. initialize expression

40.What will terminate a for loop?

1. When the control value evaluates to true.
2. When the control value evaluates to false.
3. When the step expression evaluates to true.