|  |  |  |
| --- | --- | --- |
| **APCS Exposure Java** | **Exercises 05.05-09** | **Date:** |
| **Name:** | | **Period:** |

1. What is the simplest control structure?

2. Write the Java statement that will do this action: *If your grade is 70 or better, print "You passed!"*

3. Why should *indentation* be used with control structures?

4. Explain the unusual output of program ***Java0507.java***.

5. What do you need to add to a program if you wish to control multiple statements with *if*.

6. What statement is used with **if** for *two-way selection*?

7. Write the Java statement that will do this action: *If your grade is 70 or better, print "You passed!" otherwise print "You failed!"*

8. How do you control multiple statements with *one-way or two-way selection*?

9. Does *Multi-way Selection* use a *conditional statement*?

10. Explain how *Multi-way Selection* is accomplished in Java.

11. What data types work with **switch**?

12. In a **switch** structure, what symbol separates the *selection constant*from the program statement that needs to be performed if a match is found.

13. What would be the output of program ***Java0511.java*** if **9**were entered?

14. While program ***Java0511.java*** compiles and executes, its output is strange.

How does program ***Java0512.java*** fix the problem?

15. When is the **default** statement executed?

16. What would be the output of program ***Java0512.java*** if **9**were entered?

17. What would be the output of program ***Java0512.java*** if **0**were entered?

18. How do you control multiple statements with **switch**?

19. With **switch**, can multiple *cases* yield the same result?

20. What are 2 synonyms for *Repetition*?

21. What loop structure is used with *fixed iteration*?

22. In *fixed iteration*, what does *fixed* mean?

23. What would you need to change in program ***Java0515.java*** if Joe wanted the message displayed 1000 times?

24. What would you need to change in program ***Java0516.java*** if Joe wanted the message displayed 1000 times?

25. What does *LCV* stand for?

**Use this statement for questions 26-28:** **for(j = 1; j <= 100; j++)**

26. What does the **j = 1** mean?

27. What does the **j <= 100** mean?

28. What does the **j++** mean?

29. How do you repeat multiple statements with the **for** loop structure?

30. Must the *loop counter* in a **for** statement be an **int**?

31. Give a real life situation where *fixed iteration* is not practical.

32. What kind of loop is the **while** loop?

33. The **while** loop structure requires a statement inside the loop body that was not necessary with the **for** loop. What is the purpose of this statement?

34. What is the only thing checked in a **while** loop?

35. Where must the loop counter be initialized when using a **while** loop?

36. What **must** happen inside a **while** loop?

37. Why is the **do...while** loop called a *post-condition* loop?

38. Assume the *condition* for a **while** loop is already **false**, even before the loop begins.

How many times will the loop execute?

39. Assume the *condition* for a **do…while** loop is already **false**, even before the loop begins.

Furthermore, assume nothing in the loop will ever make the condition change to **true**.

How many times will the loop execute?

40. A **for** loop is not well suited for something like entering a password. Both the **while** loop and the **do…while** loop would work in this case. If you were writing a password program, which loop structure would you chose? Explain the reasoning behind your answer.

41. Which loop structure would be good if you wanted to display 50 rectangles on the screen?

42. Which *selection* control structures are covered on the AP Exam?

43. Which *repetition* control structures are covered on the AP Exam?