Name: _____   **Date: _____**

Logic Loops and Digital Dreams: 5th Grade Code Logic Quiz

Moving beyond syntax into architectural thinking—students apply nested logic and modular functions to optimize complex virtual systems.

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1. A smart home program uses a light sensor. If the light level is below 10, the lamp turns on. If it's above 10, it turns off. Which programming concept is handling this 'Either/Or' logic?

- A.   Variable Storage
- B.   Continuous Loop
- C.   Conditional Statement
- D.   Function Call

2. Imagine you are coding a space explorer game. To keep track of how many 'Moon Crystals' a player has collected, you would use a _____.

- A.   Variable
- B.   Boolean
- C.   Loop
- D.   Comment

3. True or False: A 'While Loop' will stop executing immediately if the condition it is checking is False from the very start.

- A.   True
- B.   False

4. You are designing a robot to draw 100 identical squares. Instead of writing the code for a square 100 times, you define the 'Square' code once and name it. What is this reusable block called?

- A.   An Integer
- B.   A Function
- C.   A Constant
- D.   An Input

5. Which of these is the most efficient way to make a character walk until they hit a wall in a game maze?

- A.   Write 50 'move forward' commands manually.
- B.   Use a variable named 'Wall'.
- C.   Use a 'Repeat Until' loop with a sensor condition.
- D.   Create a function called 'Stop'.

6. If you put one Loop inside of another Loop to create a grid pattern (like rows and columns), this is known as _____ loops.

- A.   Double

    B.   Nested

    C.   Stacked

    D.   Parallel

7. True or False: In a conditional 'If-Else' statement, both the 'If' block and the 'Else' block can run at the exact same time.

    A.   True

    B.   False

8. An app asks for your birth year. It subtracts that year from the current year to find your age. In this scenario, 'current year' and 'birth year' are both examples of:

    A.   Conditionals

    B.   Loops

    C.   Inputs used as Variables

    D.   Function Definitions

9. When you send a specific piece of information into a function, such as telling a 'jump' function how high to go (e.g., jump(10)), that number 10 is called a _____.

    A.   Loop-Count

    B.   Parameter

    C.   Logic-Gate

    D.   Declaration

10. True or False: Using functions makes a program 'modular,' meaning you can fix or update one part of the code without breaking everything else.

    A.   True

    B.   False