

**Computer Science Logic Quiz**

Course (circle one) - VB Java SD

Name -

Class Period -

Date -

\_\_\_\_\_ 1. If you oversleep, you'll be late to school. Well, you aren't late today so which statement must be true?

- (A) You didn't oversleep. (B) You're late.  
(C) You did oversleep. (D) None of these are certain to be true.

\_\_\_\_\_ 2. No one held for murder is given bail. If Mr. Smith isn't held for murder, then which statement must be true?

- (A) Mr. Smith is given bail. (B) Mr. Smith isn't given bail.  
(C) Mr. Smith is innocent. (D) None of these are certain to be true.

\_\_\_\_\_ 3. No court that holds back evidence is impartial. Some courts that give in to political pressure hold back evidence. So which of the following statements must be true?

- (A) Some courts that give in to political pressure aren't impartial.  
(B) No courts that give in to political pressure are impartial.  
(C) Some courts that give in to political pressure are impartial.  
(D) None of these are certain to be true.

\_\_\_\_\_ 4. If you oversleep, you'll be late. You didn't oversleep. So which of the following statements must be true?

- (A) You aren't late. (B) You did oversleep.  
(C) You're late. (D) None of these are certain to be true.

\_\_\_\_\_ 5. If there's knowledge, then either some things are known without proof or we can prove every premise by previous arguments infinitely. Well we know that we can't prove every premise by previous arguments infinitely. And, we know that there is knowledge. So which of the following statements must be true?

- (A) Some things are known without proof. (B) Everything that's known is provable.  
(C) There's no knowledge. (D) None of these are certain to be true.

\_\_\_\_\_ 6. All dogs are animals. You aren't a dog. So you aren't an animal.

- (A) This is valid reasoning.  
(B) This is not valid reasoning.

\_\_\_\_\_ 7. Which of the statements below is true?

- (A) The number of false statements here is one.  
(B) The number of false statements here is two.  
(C) The number of false statements here is three.  
(D) The number of false statements here is four.

\_\_\_\_\_ 8. Which of the following groups of digits can be rearranged & put into a four-digit number in which the first digit is one-third the second, the third is the sum of the first and second, and the last is three times the second?

- (A) 8 4 2 1 (B) 2 3 9 1 (C) 7 3 6 2 (D) 4 3 1 9

9. Consider the following set of steps.

- Step #1: Set the variable x equal to 0  
Step #2: Set the variable y equal to 0  
Step #3: if x is equal to 5 go directly to Step #7  
Step #4: add 1 to the variable x  
Step #5: if x is an even number then add 1 to the variable y  
Step #6: go back to Step #3 & continue forward with the steps from there  
Step #7: The exercise ends when you reach this step

\_\_\_\_\_ What is the final value of the variable y? (A) 0 (B) 1 (C) 2 (D) 5

10. Consider the following set of steps.

- Step #1: Set the variable x equal to 10  
Step #2: Set the variable y equal to 0  
Step #3: if x is greater than 20, go directly to Step #7  
Step #4: add 2 to the variable x  
Step #5: if the remainder that you get when dividing x by 3 is 1, then add 1 to variable y

Step #6: go back to Step #3 and continue forward with the steps from there

Step #7: The exercise ends when you reach this step

\_\_\_\_\_ What is the final sum of the variables  $x$  and  $y$ ? (A) 22 (B) 24 (C) 12 (D) none of above

11. Consider the following set of steps.

Step #1: Set the variable  $x$  equal to 3

Step #2: Set the variable  $y$  equal to 8

Step #3: add 2 to the variable  $y$

Step #4: send the number stored in variable  $y$  to Step #6

Step #5: add the incoming number to variable  $x$  & send that number to Step #7

Step #6: add 5 to the incoming number & send that number to Step #5

Step #7: The incoming number is the answer to this exercise

\_\_\_\_\_ What is the incoming number to Step #7? (A) 18 (B) 11 (C) 13 (D) 16

12. Analyze the following pattern.

0000, 0001, 0010, 0011, 0100, 0101, \_\_\_\_\_, 0111, 1000

\_\_\_\_\_ What sequence of 0's and 1's fills in the blank? (A) 0110 (B) 1001 (C) 1010 (D) 1011

13. Analyze the following pattern.

65, 66, 67, 70, 71, 72, 73, 74, 75, 76, 77, 100, 101, 102, 103, 104, 105, 106, 107, 110, 111, 112, 113, 114, 115, 116, 117, 120, 121, 123, 124, 125, 126, 127, \_\_\_\_\_

\_\_\_\_\_ What number fills in the blank? (A) 128 (B) 129 (C) 130 (D) 131

\_\_\_\_\_ 14. What number is 200 times one fourth of one-half of 32?

(A) 1600 (B) 400 (C) 800 (D) can't be determined

\_\_\_\_\_ 15. The clothing store is going out of business. A dozen pair of men's socks are selling for half a dozen dollars. How much is one pair of socks?

(A) 10 cents (B) 50 cents (C) 1 dollar (D) 3 dollars

\_\_\_\_\_ 16. Today is Friday. What day falls two days before the day after the day before tomorrow?

(A) Tuesday (B) Wednesday (C) Thursday (D) Friday

\_\_\_\_\_ 17. Wayne is training for next week's cross-country ski competition. How long will it take him to ski 4 miles uphill at 2 mph and 4 miles downhill at 8 mph!

(A) 2 hrs (B) 3 hrs (C) 2.5 hrs (D) 3.5 hrs

\_\_\_\_\_ 18. Fix the following set of steps so that it eventually reaches Step #6 and does not continuously repeat forever?

Step #1: Set the variable  $x$  equal to 2

Step #2: if  $x$  is an odd number go directly to Step #6

Step #3: add 2 to the variable  $x$

Step #4: if  $x$  is an even number then add 2 to the variable  $x$

Step #5: go back to Step #2 & continue forward with the steps from there

Step #6: The exercise ends when you reach this step

(A) Change Step #4 to: if  $x$  is an odd number then add 2 to the variable  $x$

(B) Change Step #3 to: add 4 to the variable  $x$

(C) Eliminate Step #4

(D) Change Step #4 to: if  $x$  is an even number then add 3 to the variable  $x$