Directions: Circle multiple choice answers. Write written responses on the provided lines. You do not need to answer in complete sentences. Annotate program in the margins

1). What does the following code output?



1. The burglar can enter the building!
2. The door is closed
3. The burglar can enter the building!

The door is closed

1. The burglar can enter the building!

Hello there!

2.) The following program outputs “The dishwasher is full”. What should be changed to make the program output “The dishwasher isn’t full”?



1. Change dishesInDishwasher to 40
2. Change variable type of dishwasherCapacty to byte
3. Change dishwasherCapacity to 10
4. The program already outputs “The dishwasher isn’t full”; don’t change anything

3.) What is saved in the letterGrade variable at the end of the program? 

1. A
2. B
3. C
4. D
5. F

4.) True or false: The program in the question above could be re-written with a switch statement.

1. True
2. False

5.) Rewrite the following if-else statement in ternary form.



1. System.out.println("The light is " + (lightSwitchOn ? "off" : "on")
2. System.out.println("The light is" + (lightSwitchOn ? "on" : "off"));
3. System.out.println("The light is " + (lightSwitchOn : "off" ? "on")
4. System.out.println("The light is " + (lightSwitchOn : "on" : "off"));

6.) What is the output of the following program?



1. There is more room in the truck
2. There is more room in the truck

The truck is full

1. The truck is full
2. The program does not output anything

7.) Compare and contrast: What are the similarities and differences between a switch statement and a set of if-else statements?

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8.) Pick a logic construct from the list below. Write an example for when someone might want to use this construct.

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| * If statement | * If-else statement | * Else-if statement |
| * Switch statement | * Ternary operator |  |

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9.) Label the parts of the following switch statement and any fall-through that may occur. Write any comments/observations on the lines below.

Word bank (you may also use other words):

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| --- | --- | --- |
| Switch statement | Case/branch | Target value |
| Fall-through | Default case | Condition |



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10.) Draw a flow diagram of the following if-else statement. You do not have to adhere to any standard. Draw a diagram the way it makes the most sense to you.

