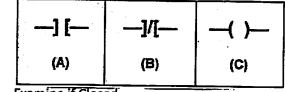
NAME:	
1)	Pushbuttons, photo eyes and limit switches are all examples of:
	A. Input devices
	B. Output devices
	C. Internal relays
2)	Give a practical example of a timer on delay.
3)	Give a practical example of a timer off delay.
4)	What is the sum of the binary numbers 11001 and 101? (please show work)
	a. 34
	b. 36
•	c. 32
	d. 30
5)	Which statement is true about the binary system? The binary system:
	a. Consists of only 8-bit information.
	b. Relies on ten different conditions.
	c. Replicates the two circuit conditions of open & closed.
6)	Convert the number 23 to binary:
	a. 1101
	b. 10111
	c. 10001
	d. 10101

7) Match the ladder logic commands to the proper symbol:



Examine if Closed

_____ Output Energize

____ Examine if Open

8) Which type of PLC logic is used in the ladder below?

- a) OR
- b) NAND
- c) AND
- d) NOR

9) Which statement is true about locating elements in diagrams and logic programs?

- a. Ladder diagrams must always have at least two ouputs for each input.
- b. Ladder elements should always be programmed in their de-energized condition.
- c. Ladder logic always reads and solves a program from right to left.

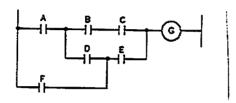
10) Motor starters, solenoids and lamps are all examples of possible:

- a. Output devices
- b. Internal relays
- c. Input devices

11) Counters, timers and sequencers are all examples of:

- a. Output devices
- b. Internal relays
- c. Input devices

- 12) Which statement is true about PLC inputs and outputs?
 - a. The PLC input symbol is a coil.
 - b. Inputs have only two possible conditions.
 - c. Outputs are energized by high voltage from the PLC.
 - d. The binary system relies on ten digits.
- 13) Given PLC logical continuity, closing which combination of contacts would FAIL to energize the output?



- a) A, D, E
- b) A, B, C
- c) F, D, B, C
- d) F, E

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