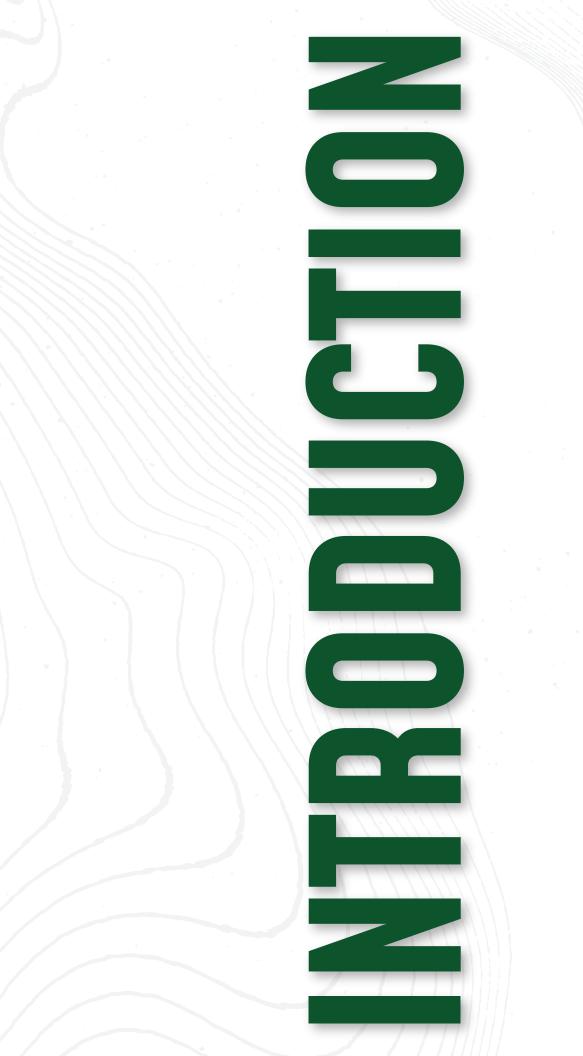
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25 EXAMPREP QUESTIONS WITH ANSWERS RED SEAL

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1. Ladder logic programming consists primarily of:

- A: Logic gate symbols with connecting lines
- B: Function blocks with connecting lines
- C: Text-based code
- D: Virtual relay contacts and coils

2. In a PLC, the scan time refers to the amount of time in which . . .

- A: The technician enters the program
- B: Timers and counters are indexed by
- C: One "rung" of ladder logic takes to complete
- D: The entire program takes to execute

3. Identify the problem in this motor control PLC program:

- A: Coil
- B: Start contact
- C: Stop contact
- D: Seal-in contact

4. What is the largest integer number that a PLC counter function can reach if it uses an 8-bit register?

- A: 128
- B: 255
- C: 256
- D: -127

5. Digital control systems are better than analog ones but always inferior at:

- A: Diagnostics
- **B: Usability**
- C: Flexibility
- D: Speed

See answers on the next page.

1.	A B	C	D				
	Note:						
2	A B	\bigcirc					
	Note:				 	 	
3.	A B	(C)	(D)				
	Note:						
4.	A B	(c)	(D)				
		\bigcirc	\bigcirc				
	Note:						
_							
5.	A B	\bigcirc	U				
	Note:						

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6. What is the typical use of a triple modular redundant (TMR) digital control system?

- A: Safely control a process
- B: Use less energy than alternative control systems
- C: Increase quick process reaction speed
- D: To save money (over alternative control systems

7. Which thermocouple statement is false?

- A: Avoid reference junctions
- B: Made of different metals
- C: produce low voltage
- D: Can be calibrated

8. High-viscosity fluid requires which pump?

- A: Radial piston pump
- B: Geo rotor
- C: Positive displacement pump
- D: Lobe pump

9. Derivative control is never employed in processes with significant which of the following?

- A: Cycling
- B: Gain
- C: Noise
- D: Variability

10. Processes always need some control to reach setpoints.

- A: Integrate, Derivative
- B: Integrating, feeding onward
- C: Self-regulating, proportional
- D: Self-regulating, integral

See answers on the next page.

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6.	A	B	C	D					
	Note:								
7.	A	B	C	D					
	Note:								
8.	(A)	B	C	(D)					
9.	(A)	(B)	(C)	(D)					
	Note:	\smile	\smile	\bigcirc					
	Note.								
10.	A	B	\bigcirc						
	Note:								

11. A 175% proportional band setting equals which gain setting?

A: 275 B: 0.576

C: 0.571

D: 1.42

12. What is a condition where integral control action saturates controller output?

A: Noise

B: Repeat

C: Wind-up

D: Self-bias

13. Except for which of the following, each answer can keep the temperature lamp off when the ignition switch is in the run position with the engine off?

- A: Blown fuse B: Open test circuit
- C: Sending unit fault
- D: Bad light

14. What is the word for liquid flows when dropping static pressure forms vapor bubbles that collapse back into the all-liquid state as fluid static pressure recovers?

- A: Pressure Piling
- **B: Vortex Shedding**
- C: Saturation
- D: Cavitation

15. How should the catalyst feed flow controller be tuned while running?

- A: Modified Ziegler-Nichols tuning
- B: General purpose, closed-loop tuning
- C: Lambda tuning
- D: Open-loop, shortcut tuning

See answers on the next page.

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11.	(A)	B	C	D						
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12.	A	B	C	U						
	Note:									
13.	A	B	(C)	(D)						
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14.	(A)	B	(C)	(D)						
	Note:									
15	A	R	6	\bigcirc						
13.										
	Note:									

16. Which analogue voltmeter reading is correct?

A: 12.0 V B: 0.22 V C: 2.2 V D: 22.0 V

17. A 1500psi system requires a minimum rating for a test header.

- A: 2250psi
- B: 1500psi
- C: 2000psi
- D: 2500psi

18. Can you convert a 0.93 controller gain value to a percent proportional band value? Convert a 175% controller proportional band value to a unitless ratio gain value.

A: 107.5% 0.5714 B: 101% 1.456 C: 267.5% 0.462 D: 105% 1.863

19. Which ratio matches 25:300 from the answers below?

- A: 14:4
- B: 1:12
- C: 2:10
- D: 15:5

20. The three transistor terminals are which?

- A: Drain, case, emitter
- B: Emitter, ground, collector
- C: Base, emitter, collector
- D: Base, ground, collector

See answers on the next page.

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16.	A	B	C	D						
	Note:				 	 	 	 	 	
17.	A	B	C	D						
	Note:									
18.	(A)	B	()	(D)						
10			\bigcirc							
19.	(A)	B	(C)	D						
	Note:									
20.	A	B	C	D						
	Note:									

21. If an atom of Lead (Pb) has an atomic number of 82 and a mass of 207, how many neutrons does its nucleus contain?

- A: 262
- B: 86
- C: 125
- D: 150

22. How does the flow meter measure gas flow?

- A: Gas weight
- B: Gas volume
- C: Cylinder pressure
- D: Gas pressure

23. The voltages and currents in an RC or LR time-constant circuit will settle to within 1% of their final value in how many time constants from which of the following answers?

- A: 7
- B: 6
- C: 12
- D: 5

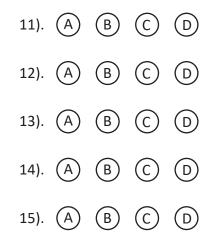
24. If the slings must be angle of 30 degrees to lift 2500 lbs, what weight can each bear?

- A: 5000lbs
- B: 2500lbs
- C: 4500lbs
- D: 2000lbs

25. WHMIS means which?

- A: Workplace Health and materials information system
- B: Workplace Health and materials information system
- C: Workplace Hazardous Materials information system
- D: Workplace Hazards and infectious material information system

A	B	C	D												
Note:															
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6).	A	B	C	D	
7).	A	B	C	D	
8).	A	B	C	D	
9).	A	B	C	D	
10).	A	B	C	D	

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

16).	A	B	C	D
17).	A	B	C	D
18).	A	B	C	D
19).	A	B	C	D
20).	A	B	C	D

21).	A	B	C	D
22).	A	B	C	D
23).	A	B	C	D
24).	A	B	C	D

25). (A) (B) (C) (D)



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