Programmable Logic Controllers 4th edition Rabiee Test Bank

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Chapter 1—Programmable Logic Controller (PLC) Overview

MULTIPLE CHOICE

1. If all the units are in one fixed enclosure, the PLC is called a ____ PLC.
   A. modular
   B. fixed
   C. discrete
   D. None of the above.

   ANS: B PTS: 1

2. The four major components of a PLC power supply are a line conditioner or varistor, transformer/rectifier unit, RC filter, and ____.
   A. valve
   B. fixed PLC
   C. zener diode
   D. microprocessor

   ANS: C PTS: 1

3. A(n) ____ is a semiconductor device that can maintain a steady voltage level.
   A. zener diode
   B. optoisolator
   C. flip-flop
   D. full-wave rectifier

   ANS: A PTS: 1

4. A ____ converts the digital output signals back to analog signals.
   A. bus
   B. register
   C. triac
   D. DAC

   ANS: D PTS: 1

TRUE/FALSE

5. One benefit of PLCs over electromechanical relay logic systems is PLCs require minor wiring and can be modified and reprogrammed within a few hours.

   ANS: T PTS: 1

6. Static RAM (SRAM) stores data in the form of charge on capacitors.

   ANS: F PTS: 1

7. Read only memory (ROM) holds the permanent system program.

   ANS: T PTS: 1

8. The arithmetic logic unit (ALU) carries out math and logic instructions.

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ANS: T PTS: 1

9. Microprocessor units (MPUs) use an octal transceiver to enable ROM, RAM, I/O port devices, and support chips.

ANS: F PTS: 1

COMPLETION

10. EEPROM is an acronym for _____.

ANS:
electrically erasable programmable read only memory
electrically erasable programmable ROM
electrically erasable PROM

PTS: 1

11. EPROM is an acronym for _____.

ANS:
erasable programmable read only memory
erasable programmable ROM

PTS: 1

12. SRAM is an acronym for _____.

ANS:
static RAM
static random access memory

PTS: 1

13. DRAM is an acronym for _____.

ANS:
dynamic RAM
dynamic random access memory

PTS: 1

14. Ports that are either open (off) or closed (on) are _____ input ports.

ANS: discrete

PTS: 1

15. Output ports that are either energized (on) or de-energized (off) are _____ output ports.

ANS: discrete

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PTS: 1

16. TTL is an acronym for _____.

ANS: transistor-transistor logic

PTS: 1

17. The _____ in the microprocessor is used to carry out math and logic instructions.

ANS:
arithmetic logic unit
ALU

PTS: 1

18. A(n) _____-based microprocessor uses several math instructions to carry out complex commands.

ANS: CISC

PTS: 1

19. A(n) _____-based microprocessor typically uses only one instruction for a complex command.

ANS: RISC

PTS: 1

20. A(n) _____ converts the analog input signals to digital signals.

ANS:
analog-to-digital converter
analog to digital converter
ADC

PTS: 1

21. A(n) _____ converts the digital output signals back to analog signals.

ANS:
digital-to-analog converter
digital to analog converter
DAC

PTS: 1

22. SLC is an acronym for _____.

ANS: small logic controller

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PTS: 1

23. SRAM uses a(n) _____ to hold a data bit.

ANS: internal flip-flop

PTS: 1

24. CPU is an acronym for _____.

ANS: central processing unit

PTS: 1

25. A(n) _____ diode is a semiconductor device that can maintain a steady voltage level.

ANS: Zener

PTS: 1

26. To physically isolate the CPU from the input device, a(n) _____ is used to input the DC signal to the CPU board.

ANS: optoisolator

PTS: 1

27. PPI is an acronym for _____.

ANS: programmable peripheral interface

PTS: 1

28. UVEPROM is an acronym for _____.

ANS:
ultraviolet-erasable programmable ROM EPROM
ultraviolet-erasable programmable ROM
ultraviolet-erasable programmable read only memory
ultraviolet erasable programmable read only memory
ultraviolet erasable programmable read-only memory

PTS: 1

29. A(n) _____ is a sequential digital device that generates a different output for every input on the next clock pulse.

ANS:
flip-flop
flip flop

PTS: 1

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30. BIOS is an acronym for _____.

    ANS:
    basic input/output system
    basic input output system
    basic input-output system

    PTS: 1

31. The MPU uses _____ memory to speed up the data transfer while it is executing a program.

    ANS: cache

    PTS: 1

32. The software that resides in ROM is called _____.

    ANS: firmware

    PTS: 1

33. A microprocessor unit (MPU) uses a(n) _____ to enable ROM, RAM, I/O port devices, and support chips.

    ANS: address decoder

    PTS: 1

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