

# TS06 - Pre-Instructional Survey

Name \_\_\_\_\_ Date \_\_\_\_\_

1. If two devices are both DTEs and the signaling is EIA-232( ) then:
  - a) Since they are both DTEs, they share the same protocol.
  - b) Cabling must cross signals using a null modem
  - c) The cabling can be run straight through
  - d) The voltage levels will be 0 to 5 Volts.
  
2. EIA-422 has better noise immunity than EIA-232E because:
  - a) The cabling can be run straight through.
  - b) EIA-422 isn't better than EIA-232.
  - c) The voltage levels are increased.
  - d) EIA-422 uses a balanced signal.
  
3. The traditional MODBUS protocol suite contains what protocol layers?
  - a) It doesn't have layers.
  - b) Layers 1, 2 and 4.
  - c) Layers 1, 2 and 7.
  - d) All 7 layers.
  
4. The problem with EIA-232( ) is:
  - a) The limited data rates at which it can be run.
  - b) The limited distances it can travel.
  - c) Ground loops.
  - d) All of the above.
  
5. Asynchronous data communications means that:
  - a) Each character in the message has its own timing bits.
  - b) The voltage levels are increased randomly.
  - c) Data is always sent randomly.
  - d) You must use EIA-232( ).

6. You normally can't connect two supervisory (SCADA) PCs together using MODBUS because:
- a) The cabling is too difficult.
  - b) Both are MODBUS masters.
  - c) You can and it will work fine all the time.
  - d) As voltage levels increase, one explodes.
7. ModBus RTU is different than DeviceNet because:
- a) It uses a different media access method.
  - b) It has a different message format.
  - c) It uses a different cable type.
  - d) Two or more of the above.
8. Plugging a serial cable into a parallel port will:
- a) Require cross-over cabling, which is difficult to do.
  - b) Be inoperable and may damage the parallel port.
  - c) Cause the parallel port to become a serial port
  - d) Work well for slow speed communications.
9. The data link layer includes protocols that look after:
- a) Media access control.
  - b) Physical addressing.
  - c) Framing.
  - d) All above.
10. The industrial 4-20 mA current loop standard is:
- a) An analog, simplex signaling system.
  - b) Based on EIA-232( ) voltage levels.
  - c) Based on the MODBUS protocol.
  - d) A digital signaling system.

11. Ethernet and IEEE 802.3 are:
- a) Two names for essentially the same LAN with minor differences
  - b) Are now exactly the same physical and datalink standards.
  - c) Somewhat different physical and datalink standards.
  - d) Not physical and datalink standards at all.
12. Which layer of the ISO OSI Model defines protocols for message routing?
- a) Layer 1
  - b) Layer 2
  - c) Layer 3
  - d) Layer 7
13. If a DeviceNet experiences a sudden increase in error rate, it is indicative of:
- a) Poor insurance policies.
  - b) Open medium cable.
  - c) Too high data rate.
  - d) None of the above.
14. A DeviceNet had the last terminator on the East segment removed and it brought the network down. What is the probable cause?
- a) Computer was removed with power on.
  - b) Terminating resistor was left off of cable.
  - c) The remaining NICs had higher serial numbers.
  - d) The network management software detected an error.
15. Dial-up over POTS uses this layer 2 protocol to connect to the Internet:
- a) PFP
  - b) ISDN
  - c) HTTP
  - d) PPP

16. IEEE 802.5 describes which of the following?
- a) Token passing ring.
  - b) Token passing bus.
  - c) CSMA/CD bus.
  - d) DLL Format.
17. 100BASE-T refers to an IEEE 802.3 (Ethernet) LAN and indicates:
- a) 100 Mbps, baseband, STP, 100 meter segment length.
  - b) 100 Mbps, baseband, UTP, 100 meter segment length.
  - c) 100 Mbps, baseband, UTP, 10 meter segment length.
  - d) 100 Mbps, baseband, RG-58 A/U Coax, 185 meter segment length.
18. A bridge operates at which layer of the OSI model:
- a) Layer 1
  - b) Layer 2
  - c) Layer 3
  - d) Layer 7
19. A switch adds what to an Ethernet Frame for VLAN functions?
- a) A 32-bit tag including ID number
  - b) More data delivery capacity
  - c) A new header address
  - d) Extra checksum bits
20. Rapid Spanning Tree Protocol make it possible to:
- a) Have redundant loops in your LAN
  - b) Deliver messages more rapidly
  - c) Perform a database tree-search
  - d) Span a longer cable distance

## TS06 – Pre-Instructional Survey Answer Sheet

1. b
2. d
3. c
4. d
5. a
  
6. b
7. d
8. b
9. d
10. a
  
11. b
12. c
13. b
14. b
15. d
  
16. a
17. b
18. b
19. a
20. a