

Taking the Certification Test

Each question has **only one correct answer**. Please record all answers on this answer sheet. The order of the questions in the test roughly follows the order of topics covered in class. All questions are equally weighted. A passing score is 90%.

Returning the Certification Test

Option 1: Fax the answer sheet (following page) to **Yaskawa Technical Training Services** at (847) 887-7185.

Option 2: E-mail the answers to all questions to **training@yaskawa.com**. Be sure to include all of the contact information listed on the answer sheet.

Option 3: Mail the answer sheet to **Yaskawa Technical Training Services** at the address shown on the bottom of this page.

Receiving Your Score

When the test is taken during the training class, you will receive your score in class as soon as it can be graded. When taken as a CLEP test, receive your score from Technical Training Services by sending an email to **training@yaskawa.com** or call 800-927-5292, dial 4 for product training. In either case, you may review your answers only if a passing score is received.

Answer Sheet:

- | | | | | |
|----------|----------|-----------|-----------|-----------|
| 1. _____ | 5. _____ | 9. _____ | 13. _____ | 17. _____ |
| 2. _____ | 6. _____ | 10. _____ | 14. _____ | 18. _____ |
| 3. _____ | 7. _____ | 11. _____ | 15. _____ | 19. _____ |
| 4. _____ | 8. _____ | 12. _____ | 16. _____ | 20. _____ |

21.

22.

23.

24.

25.

Contact Information:

Name: _____ Title: _____

Company: _____ Email: _____

Address: _____

Phone Number: _____ Fax number: _____

Supervisor's Name/ Title: _____

Test Date: _____

Multiple Choice and True/False

1. At which baud rate does N2 operate?
 - a. 1200
 - b. 2400
 - c. 4800
 - d. 9600

2. What type of cabling should be used for BAS networks?
 - a. Shielded Twisted Pair
 - b. Unshielded Twisted Pair
 - c. Cat-5
 - d. Cat-5e

3. How many addressable nodes per segment are allowed on APOGEE? And how many segments can be connected?
 - a. 32 nodes/4 segments
 - b. 64 nodes/3 segments
 - c. 32 nodes/3 segments
 - d. 128 nodes/2 segments

4. The E7L resides on the N1 bus in a Metasys network.
 - a. True
 - b. False

5. Points are from the perspective of the BAS.
 - a. True
 - b. False

6. At what level does an MEC get connected to an MBC?
 - a. Management level
 - b. N2
 - c. N1
 - d. Building level

7. A speed reference is an example of an analog input point.
 - a. True
 - b. False

8. Which communication terminals must be jumpered together for two-wire RS-485?
 - a. R+/S+ and R-/S-
 - b. R+/S- and R-/S+
 - c. R+/R- and S+/S-
 - d. None

- 9 thru 14. Put the following six steps in the correct order.
(Question 9 is first step, question 10 is second step, etc.....question 14 is last)
 1. Set the required communication parameters.
 2. Perform communication with the DDC.
 3. Turn ON the input power to the Drive.
 4. Turn OFF input power to the Drive and connect communication cable between the DDC and the Drive.
 5. Turn OFF the input power to the Drive, and check that the Digital Operator display has completely disappeared.
 6. Turn on the input power to the Drive once again.

15. What table lists the parameter settings for the E7L as required by different control configurations?
- a. Table 3, E7B-00
 - b. Table 1.4, TM.E7L.00
 - c. Table 6, E7L-00
 - d. Table 5.9, TM.E7.02
16. When using differential PI, which parameter sets the offset value between the two feedbacks?
- a. A1-03
 - b. B5-07
 - c. H1-01
 - d. Terminal A2
17. What two types of control signals determine the line containing the correct parameter settings on Table 6 in E7L-00?
- a. Feedback/DIP Switch
 - b. Run/Speed or PI Control
 - c. DIP switch and Options
 - d. Run Parameters
18. What terminal numbers are used for communication on the E7L?
- a. TB5-2,7
 - b. TB4-1,2
 - c. TB4-2,4
 - d. TB4-1,2,3,4
19. When using PI, HAND mode disables PI, and the speed command comes from the network.
- a. True
 - b. False
20. What does ASC stand for?
- a. Automated System Controller
 - b. Application Specific Controller
 - c. Awesomely Superb Controller

Short Answer

21. What is contained in the NCU?
22. What does the Communications/Inverter Select 2 function do?
23. List all of the instruction manuals suitable to use when setting up network communications for any of the E7 family of products.
24. What is the procedure for contacting the HVAC Applications Group?
25. List some examples of an ASC