SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead®

STUDY GUIDE

FOR

CONTROL SYSTEMS TECHNICIAN

TEST NUMBER: 2993

INTRODUCTION

The 2993 Control System Tech is a job knowledge test designed to cover the major knowledge areas necessary to perform the job. This guide contains strategies to use for taking tests and a study outline, which includes knowledge categories, major job activities, and study references.

TEST SESSION

It is important that you follow the directions of the Test Administrator exactly. If you have any questions about the testing session, be sure to ask the Test Administrator before the testing begins. During testing, you may NOT leave the room, talk, smoke, eat, or drink. Since some tests take several hours, you should consider these factors before the test begins.

Mobile phones or other electronic equipment will NOT be allowed in the testing area.

All questions on this test are multiple-choice format and have four possible answers. All knowledge tests will be taken on the computer.

This test is divided into two parts. When you reach the end of part one, you will have to submit your answers to reach part two. You will not be able to change any of your answers from part one after you submit your responses. Once you have submitted part one, you have the option to take a 30 minute break. If you chose not to take that break, you can proceed directly to part two. **The test has a total time limit of four hours.**

You will be provided with a non-programmable calculator.

You will receive a Test Comment form so that you can make comments about test questions. Write any comments you have and turn it in with your test when you are done.

STUDY GUIDE FEEDBACK

At the end of this guide you have been provided with a Study Guide Feedback page. If a procedure or policy has changed, making any part of this guide incorrect, your feedback would be appreciated so that corrections can be made.

ASSESSMENT TAKING STRATEGIES

The test contains multiple-choice questions. The purpose of this section is to suggest techniques for you to use when taking one.

Your emotional and physical state during the test may determine whether you are prepared to do your best. The following list provides common sense techniques you can

CONFIDENCE

If you feel confident about passing the test, you may lose some of your anxiety. Think of the test as a way of demonstrating how much you know, the skills you can apply, the problems you can solve, and your good judgment capabilities.

PUNCTUALITY

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CONCENTRATION

Try to block out all distractions and concentrate only on the test. You will not only finish faster but you will reduce your chances of making careless mistakes. If possible, select a seat away from others who might be distracting. If lighting in the room is poor, sit under a light fixture. If the test room becomes noisy or there are other distractions or irregularities, mention them to the Test Administrator immediately.

BUDGET YOUR TIME

Pace yourself carefully to ensure that you will have enough time to complete all tasks/functions.

READ CRITICALLY

Read all directions and questions carefully.

Remember that the techniques described in this section are only suggestions. You should follow the test taking methods that work best for you. If particular questions seem difficult to understand, make a note of them, continue with the test and return to them later.

MAKE EDUCATED GUESSES

Make an educated guess if you do not know the answer or if you are unsure of it.

DOUBLE-CHECK MATH CALCULATIONS

Use scratch paper to double check your mathematical calculations.

REVIEW

If time permits, review your answers. Do the questions you skipped previously.

Make sure each multiple-choice question has your correct answer selected.

Remember the techniques described in this section are only suggestions. You should follow the test taking methods that work best for you.

JOB KNOWLEDGE CATEGORIES AND STUDY REFERENCES

Below are the major job knowledge areas (topics) covered on the test and the associated study references. Listed next to each knowledge category is the number of items on the exam that will measure that topic. You can use this information to guide your studying. Some exams also contain additional pretest items. Pretest items will appear just like all of the other items on your exam, but they will not affect your score. They are an essential part of ensuring the test remains relevant to successful performance of the job.

There are a total of 92 items on the test and the passing score is 69%.

Computer Technology (37 items)

Refers to the languages, hardware, software, components, and mechanics of computer and data communication systems, and other associated data collection, processing, and display devices- together with their purpose, function, and inter-relationships. This includes, but is not limited to: binary expression, memory, modems, data transmission cables, and network topology.

References:

- Aspinwall & Todd. Troubleshooting your PC.4th ed. Foster City: MIS Press. 1999.
- Valkenburg, Nooger, & Neville. Basic Solid-State Electronics. Revised. Prompt, 1992.
- Comer, Douglas. Internetworking with TCP/IP. Pearson Education Inc., 2014.
- McQuerry, S. Interconnecting Cisco Network Devices. Cisco Press, 2000.
- Sippl, Charles J. Data Communications Dictionary. Van Nostrand Reinhold, 1976.
- Sybex. Networking Complete. Sybex, 2002.

Electrical Theory and Application (37 items)

Refers to the knowledge of the AC and DC power theory, various scaling and numbering systems, the computational methods for obtaining electrical and mathematical equivalences, and the application of such theory, terms, and nomenclature to the servicing and maintenance of operating power systems.

References:

- Croft, Terrell, et al. American Electrician's Handbook. McGraw-Hill, 2013.
- Gibilisco, Stan. Teach Yourself Electricity and Electronics. 3rd ed. New York: McGraw Hill. 2002.
- Hart, George. Ugly’s Electrical References. Burleson Distributing Corporation, 2005.
- Henry, Tom. Ohm's Law, Electrical Math and Voltage Drop Calculations. Revised. 1992
- Mileaf, Harry, ed. Electricity One-Seven. 2nd ed. New Jersey: Prentice

- Valkenburg, Nooger, & Neville. Basic Solid-State Electronics. Revised. Prompt, 1992.

Tools and Equipment (14 items)

Refers to the knowledge of tools, materials, parts, equipment, and instruments used to service and maintain computer and other electrical information systems including oscilloscope, multimeter, digital voltmeter, and spectrum analyzer — together with their purpose, function, nomenclature, and use.

References:

- Croft, Terrell, et al. American Electrician's Handbook. McGraw-Hill, 2013.
- Gibilisco, Stan. Teach Yourself Electricity and Electronics. 3rd ed. New York: McGraw Hill. 2002.
- Mileaf, Harry, ed. Electricity One-Seven. 2nd ed. New Jersey: Prentice
- Valkenburg, Nooger, & Neville. Basic Solid-State Electronics. Revised. Prompt, 1992.

Safety (4 items)

Refers to the knowledge of work safety, electrical safety, safety hazards.

References:

- UNITED STATES DEPARTMENT OF LABOR. Occupational Safety and Health Administration, www.osha.gov/.

STUDY GUIDE FEEDBACK

Please email to notify us of any changes in policies, procedures, or materials affecting this guide.

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