

STUDY GUIDE
FOR
METER TECHNICIAN 5
TEST

TEST NUMBER: 2683 AND 4683

INTRODUCTION

There are two tests that you will need to pass in order to qualify for the Meter Technician 5 position. The first test, 2683 Meter Technician 5 Test is a job knowledge test designed to cover the major knowledge areas to perform the job. The second test, 4683 Meter Technician 5 Performance Test is a performance test that simulates tasks you perform on 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, 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.

Knowledge Test: All questions on this test are multiple-choice and have four possible answers or in hot-spot format. All knowledge tests will be taken on the computer. Consult the following link and click on Computer Based Testing for more information: www.edison.com/studyguides.

The test has a three-hour time limit. A scientific calculator will be provided for you to use during the test. The calculator provided during the test session will be one of these models:

- Casio fx-250HC,
- Texas Instruments TI-30XA,
- Texas Instruments TI-36X

You will NOT be able to bring or use your own calculator during testing.

Performance Test: You will be given a test booklet in which you will mark directly onto with the pencil provided.

The performance test has a one-hour time limit.

For each test, 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. You will receive a Test Comment form so that you

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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 2683 Meter Technician 5 Knowledge Test contains multiple-choice questions and may also contain hot spot questions. The 4683 Meter Technician 5 Performance Test contains a performance test that simulates tasks you perform on the job. The purpose of this section is to help you to identify some special features of a multiple-choice test and 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 2683 Meter Technician 5 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 2683 Meter Technician 5 Test remains relevant to successful performance of the job.

There are a total of 80 items on the 2683 Meter Technician 5 Test and the passing score is 77%. This score was determined during the test validation process.

Meter Characteristics (24 items)

Knowledge of meter characteristics for all meters including prefixes for all meter types, classes, and forms; ending potentials; service voltages; how to read and interpret T-prints for installation; and panel configurations and tolerances.

References:

EI Meter and Service Committee, Handbook for Electricity Metering. 11th Ed. Washington, D.C.: Edison Electric Institute, 2014.

EMS Meter Shop & Field Training: Single-phase and Poly-phase course materials and references (2013).

Distribution Overhead Construction Standards (DOH)*

Electrical Service Requirements (ESRs)*

On the job training.

* Can be found on the SCE portal

Metering Theory & Calculations (25 items)

Knowledge of Single-phase and Poly-phase metering theory including: metering calculations and formulas (i.e., performing meter tests; standard read calculations, consumption, load, etc...); metering errors including how they are calculated; phase angles and power factor; billing constant; back-up tests.

References:

www.math.com

Alexander, Richard. Pocket Guide to Watthour Meters. 4th Ed. 2010.

EI Meter and Service Committee, Handbook for Electricity Metering. 11th Ed. Washington, D.C.: Edison Electric Institute, 2014.

Hart, George. Ugly's Electrical References. Burleson Distributing Corporation, 2005.

Mileaf, Harry, ed. Electricity One-Seven. 2nd ed. New Jersey: Prentice Hall, 1996.

EMS Meter Shop & Field Training: Single-phase and Poly-phase course materials and references (2013).

On the job training.

Safety and Field Operations (18 items)

Knowledge of safety and operating procedures, standards, and policies associated with the duties of a Meter Technician 5 including: Metering Field Organization (MFO) Standards of Performance and SCE's Accident Prevention Manual (APM) as it relates to all work being performed; how to handle electrical equipment and power tools (i.e., grounding techniques, de-energizing equipment, voltage requirements, etc...); and proper tailboarding procedures.

References:

Related sections in The SCE Accident Prevention Manual*:

1. Policy Section
2. General Rules
3. First Aid Rules
4. Definitions

MISO Standards of Performance Manual including the EMS Addendum

Electrical Metering Services: Field Meter Test Procedures Manual

On the job training.

* Can be found on the SCE portal

Meter Service Troubleshooting and Reporting (13 items)

Knowledge of how to troubleshoot and report jobs including: Field Automated Test System (FATS) reporting; voltage limitations and standard procedures for verifying the accuracy and functionality of meters and metering equipment; service wiring procedures for installing new or modified meters; metering problems that lead to irregularities; metering adjustments; how to report metering problems.

References:

Field Automated Test System (FATS) training manual

Alexander, Richard. Pocket Guide to Watthour Meters. 4th Ed. 2010.

EI Meter and Service Committee, Handbook for Electricity Metering. 11th Ed. Washington, D.C.: Edison Electric Institute, 2014.

Hart, George. Ugly's Electrical References. Burleson Distributing Corporation, 2005.

Mileaf, Harry, ed. Electricity One-Seven. 2nd ed. New Jersey: Prentice Hall, 1996.

EMS Meter Shop & Field Training: Single-phase and Poly-phase course materials and references (2013).

On the job training.

STUDY REFERENCES FOR THE METER TECHNICIAN 5 PERFORMANCE TEST

For the 4683 Meter Technician 5 Performance Test, you will be completing tasks that are representative of the work performed as a Meter Technician.

Specifically, for the work sample exercise, you will be completing a paper/pencil exercise that measures your ability to successfully perform wire hook-up for various types of meter tests.

In preparation for the Performance Test, you can use the reference list below as a guide to enhance your knowledge of meter test hook-ups.

References:

EI Meter and Service Committee, Handbook for Electricity Metering. 11th Ed. Washington, D.C.: Edison Electric Institute, 2014.

EMS Meter Shop & Field Training: Single-phase and Poly-phase course materials and references

- EMS Field Test Documents (FATS)

On the job training.

STUDY GUIDE FEEDBACK

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