

STUDY GUIDE FOR CHEMICAL TECHNICIAN

TEST NUMBER: 2782

INTRODUCTION

The **2782 CHEMICAL TECHNICIAN** test 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.

The test is divided into two parts. Both Parts 1 and II have a 2-hour (120 min.) time limit. You have been allowed enough time to make any necessary calculations. The total test time is four hours.

A scientific non-programmable calculator will be provided for you to use during the test.

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

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.

TEST 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 use before the test begins.

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

Arrive early enough to feel relaxed and comfortable before the test begins.

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.

RETURN TO DIFFICULT QUESTIONS

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 Test 2782 Chemical Technician 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 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 is a total of 83 items on the test and the passing score is 70%. This score was determined during the test validation process.

TOOLS, EQUIPMENT AND MATERIALS (35 ITEMS)

Refers to the knowledge of plant equipment (e.g., valves, pumps, and condenser) and analytical chemistry equipment. Knowledge of units of measurements including how to read measurements on instruments and glassware and how to convert units of measurements.

PROCESSING EQUIPMENT AND MATERIALS (6 ITEMS)

Knowledge of the operation of process equipment and sampling system devices.

CHEMISTRY (38 ITEMS)

Knowledge of theoretical principles of analytical chemistry, water chemistry, wet chemistry, water treatment, auxiliary systems, and proper sampling techniques. Knowledge of reagents including how to make and appropriately use reagents.

ENVIRONMENTAL COMPLIANCE (4 ITEMS)

Refers to the knowledge of proper preservation techniques and EPA requirements and limits.

STUDY REFERENCES

Any college chemistry textbook that includes an introduction to analytical chemistry.

Annual Book of ASTM Standards, Volume 11.01 and 11.02, American Society for Testing and Materials.

Beuker, Power Plant Water Chemistry A Practical Guide, Pennwall Publishing Company, 1997, Chapters 1-5, 7.

Standard Methods for the Examination of Water and Wastewater, APHA, 23rd edition, Method SM 4500-Cl.

"Methods of Chemical Analysis of Water and Wastewater", EPA-600/4-79-020, revised March 1983. Pages xvi-xx.

"Test Methods for Evaluating Solid Waste" Physical/Chemical Methods, EPA SW 864, Chapter 1.

STUDY GUIDE FEEDBACK

Please email Southern California Edison's Corporate Testing to notify us of any changes in policies, procedures, or materials affecting this guide.

Edison.Testing@sce.com

Test Name: **2782 Chemical Technician Knowledge Test**

COMMENTS: