



STUDY GUIDE FOR CONSTRUCTION WELDER TEST

TEST NUMBER: 2892

INTRODUCTION

The 2892 Construction Welder 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 or hot spot questions. Multiple choice questions have four possible answers. All knowledge tests will be taken on the computer. For more information on computer-based testing, follow the link: www.edison.com/studyguides and click on Computer Based Testing Information.

The test has a three hour time limit. A basic 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.

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 2892 Construction Welder 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 the other items on your exam, but they will not affect your score. They are an essential part of ensuring the 2892 Construction Welder Test remains relevant to successful performance of the job.

There are a total of 72 items on the 2892 Construction Welder Test and the passing score is 67%. This score was determined during the test validation process.

Welding Procedures (22 items)

Knowledge of different welding procedures; knowledge of the preparation and proper treatment of metals to secure perfect weld; knowledge of the types and joints used in welding various metals; knowledge of the effects of temperature on solids and gases; knowledge of the 5 essentials of a proper weld; knowledge of welding equipment's purpose and normal functions; knowledge of proper materials (including solids and gases) and equipment used for welding; knowledge of welding rods; knowledge of materials and alloys used in the trade and their properties; and knowledge of plasma cutters, oxyacetylene cutting equipment, heliarc welding equipment and gas operated arc welders.

Blueprints and Diagrams (4 items)

Knowledge of general structural design concepts; knowledge of basic welding symbols; and knowledge of and ability to interpret Construction specifications from prints and diagrams.

Mathematics (10 items)

Understanding of basic mathematic calculations (e.g., add, subtract, multiply, and divide); understanding of the calculations and conversions of fractions, percents and decimals; and understanding of basic geometry (e.g., measuring angles, Pythagorean theorem, calculating area, circumferences).

Safety Procedures and Practices (15 items)

Understanding of safety equipment operation and safe work habits; knowledge of safety procedures when dealing with metals; knowledge of procedures for handling flammable materials; knowledge of personal protection equipment; knowledge of hazardous material handling; knowledge of shop safety procedures and practices; knowledge of hearing conservation safety

Mechanical Equipment and Tools (21 items)

Understanding of general mechanical operating principles; knowledge of basic rigging procedures; knowledge of machine shop tools and practices; knowledge of basic

mechanical tools and practices; knowledge of general preventive maintenance procedures; knowledge of pipefitting; knowledge of basic engineering standards such as screw and pipe threads; knowledge of hand and power tool used in repairs and/or Constructions, such as taps, dies, dividers, straightedges, grinders, combination squares, brazing equipment, drills, files, drill presses, power presses, hammers, hoists, power saws, wrenches and pliers

STUDY REFERENCES

The following books may be purchased by accessing the internet's various book sellers or at a local technical book dealer or used bookstore.

Althouse, A., Bowditch, K., Bowditch, M., Bowditch, W. & Turnquist, C. Modern welding. (13th Edition). Goodheart-Wilcox Co, 2023.

CalOsha. Division of Occupation Safety and Health. Portable Ladder Safety (Safe work practices).

Davis, T. & Nelson, C. Audel. Mechanical Trades Pocket Manual. Indianapolis, IN: Wiley Publishing, Inc, (2003).

Finch, R. Welder's handbook: A Guide to Plasma Cutting, Oxyacetylene, ARC, MIG and TIG. New York, NY: The Penguin Group, (2007).

Frankland, T. The Pipe Fitter's and Welder's Handbook. (Revised Edition). Glencoe, (1984).

Jeffus, L., Roy, D. & Thompson, W. Welding Principles and Application. (8th Edition). Cengage Learning, (2016).

Kemp, A. Industrial Mechanics. (4th Edition). American Technical Pub, (2018).

Klinke, J. Rigging Handbook: The Complete Illustrated Field Reference. (5th Edition). Acra Enterprises Inc, (2016).

Marlow, F. Welding Fabrication and Repair. (1st Edition). New York, NY: Industrial Press Inc. (2002).

Moniz, B. & Miller, R. Welding Skills. (5th Edition). Amer Technical Pub, 2015.

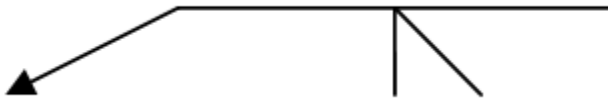
Prindle, K. & Williams, E. Arithmetic the Easy Way. (4th Edition). Hauppauge, NY: Barron's Educational Series, Inc, (2005).

Pritchard, D. Soldering, Brazing & Welding: A manual of techniques. Crowood Press, (2001).

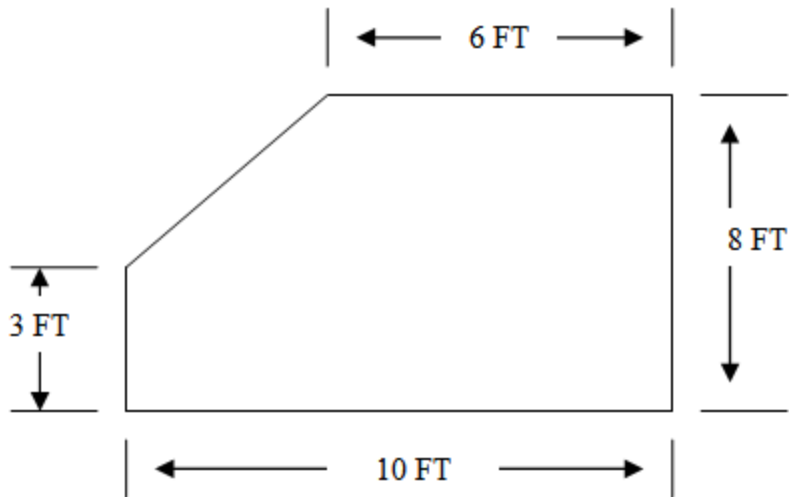
SAMPLE QUESTIONS

The following sample questions should give you some idea of the form the test will take.

1. What is the welding technique in which the increments of weld metal are deposited opposite to the direction of progress?
 - a. Staggered weld.
 - b. Skip method.
 - c. Intermittent.
 - d. Back step.
2. A weld that will bend permanently has:
 - a. tensile strength.
 - b. compressive strength.
 - c. ductility.
 - d. bending strength.
3. The symbol below, when appearing on a blueprint would indicate a _____ weld.



- a. fillet
 - b. bevel
 - c. flare-bevel
 - d. corner flange
4. What is the area of the sheet of metal shown below in square feet? fillet
 - a. 73
 - b. 73.5
 - c. 73.6
 - d. 73.7



5. Which of the following statements regarding pipe size and thread number is true according to the American Standard (Briggs).
 - a. 1" to 2" pipe is 14 threads per inch.
 - b. 1/2" to 3/4" pipe is 11-1/2 threads per inch.
 - c. 1/4" and 3/8" pipe is 11-1/2 threads per inch.
 - d. 1/2" and 3/4" pipe is 14 threads per inch.

6. The primary purpose of a chain hoist is to:
 - a. reduce the effort required to lift a rigged load.
 - b. increase the strength of rigging cables.
 - c. equalize the lifting potential of rigging cables.
 - d. prevent the swinging or turning of a rigged load.

SAMPLE QUESTION ANSWERS

1. D
2. C
3. B
4. B
5. D
6. A

STUDY GUIDE FEEDBACK

Please use this page to notify us of any changes in policies, procedures, or materials affecting this guide. Once completed, return to:

Edison.Testing@SCE.com

Test Name: 2892 Construction Welder Knowledge Test

COMMENTS: