CSLB C-60 Welding Contractor Practice Test

20 original practice questions for the California contractor license exam, with an answer key and explanations.

Format
Multiple choice, 4 options, one best answer

Topics
Grouped by the published CSLB topic areas

Question bank
Last updated: November 2026

How to use this test

1. Answer all 20 questions without notes — the CSLB exam is closed-book.
2. Check the answer key at the end and read the explanation for every miss.
3. Take the same test online for instant explanations and a result by topic: test2pro.com/free-practice-tests/c60-welding-contractor

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Exam topic areas and approximate weights

Planning and Estimating	17%
Welding Preparation	22%
Welding, Brazing, and Soldering	28%
Cutting Processes	11%
Safety	22%

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Questions

1 WELDING, BRAZING, AND SOLDERING

Which SMAW condition is most likely to leave overlap at the weld toes?

(A) High amperage with fast travel
(B) Low amperage with slow travel
(C) A small electrode with normal travel
(D) High arc force with fast travel

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2 WELDING, BRAZING, AND SOLDERING

During low-amperage DC GTAW, an oversized tungsten electrode is most likely to cause which problem?

(A) Rapid melting of the tungsten tip
(B) A consistently narrower arc
(C) An unstable, wandering arc
(D) Excessively deep weld penetration

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3 WELDING, BRAZING, AND SOLDERING

In resistance spot welding, current is reduced by half while resistance and weld time stay the same. How much heat is generated?

(A) One-half as much
(B) One-fourth as much
(C) Twice as much
(D) The same amount

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4 WELDING, BRAZING, AND SOLDERING

Which substance is a common active ingredient in corrosive acid soldering flux?

(A) Cadmium oxide
(B) Zinc chloride
(C) Magnesium oxide
(D) Rosin

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5 WELDING, BRAZING, AND SOLDERING

Which welding setup normally uses a constant-current power source?

(A) Manual GTAW (TIG)
(B) FCAW with a constant-speed wire feeder
(C) GMAW with a constant-speed wire feeder
(D) SAW with a constant-speed wire feeder

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6 WELDING, BRAZING, AND SOLDERING

When weaving a flat lap-joint weld between equal-thickness steel plates, where should the welder direct more arc heat?

(A) Toward the lower plate’s surface
(B) Toward the exposed edge of the upper plate
(C) Equally toward both plates
(D) Away from the joint root

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7 WELDING, BRAZING, AND SOLDERING

Under AWS D1.1, which statement about welder performance qualification is correct within the applicable process and position limits?

(A) Either a fillet or groove test qualifies both weld types
(B) A fillet-weld test also qualifies groove welds
(C) Neither test can qualify the other weld type
(D) A groove-weld test can also qualify fillet welds

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8 PLANNING AND ESTIMATING

Which information does a base-metal mill test report (MTR) certify?

(A) The metal's chemical composition and mechanical properties
(B) The welder's qualified processes and positions
(C) The power source's calibration results
(D) The completed weld's visual inspection results

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9 PLANNING AND ESTIMATING

On an AWS welding symbol, a fillet-weld triangle appears above the reference line. Where is the weld required?

(A) On the other side of the joint
(B) On the arrow side of the joint
(C) On both sides of the joint
(D) Only at the ends of the joint

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10 PLANNING AND ESTIMATING

An AWS fillet-weld symbol has 3-8 immediately to its right. What does the 3 specify?

(A) The length of each weld segment
(B) The center-to-center pitch
(C) The clear gap between weld segments
(D) The fillet-weld leg size

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11 PLANNING AND ESTIMATING

Which pair of stainless steel grades is intentionally alloyed with molybdenum?

(A) 304 and 309
(B) 316 and 317
(C) 301 and 302
(D) 410 and 430

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12 WELDING PREPARATION

Which tool should be used to brush oxide from aluminum before welding?

(A) A clean stainless-steel wire brush
(B) A carbon-steel wire brush
(C) A stiff nylon-bristle brush
(D) A carbon-steel grinding disc

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13 WELDING PREPARATION

Which workpiece is generally better suited to ultrasonic testing than radiography for internal-flaw inspection?

(A) Heavy carbon-steel weldment
(B) Thin aluminum sheet
(C) Thin-wall brass tubing
(D) Coarse-grained gray-iron casting

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14 WELDING PREPARATION

An E7018 electrode falls into a bucket of water and becomes soaked. What should be done with it?

(A) Let it air-dry before use
(B) Discard it
(C) Rebake it in an electrode oven, then use it
(D) Use it at a higher amperage

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15 CUTTING PROCESSES

With a properly adjusted oxyacetylene cutting flame, how much clearance should remain between the preheat inner-cone tips and the steel?

(A) 1/16–1/8 in.
(B) 3/16–1/4 in.
(C) 1/4–5/16 in.
(D) 3/8–1/2 in.

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16 CUTTING PROCESSES

Before opening the cutting-oxygen jet, what condition should steel reach for oxy-fuel cutting?

(A) Its ignition temperature, about 1,600–1,800°F
(B) Its melting temperature, about 1,600–1,800°F
(C) Its ignition temperature, about 1,200–1,400°F
(D) Its melting temperature, about 1,200–1,400°F

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17 SAFETY

On clean base metal with normal operating settings, which listed process generally produces the most particulate welding fume?

(A) Gas tungsten arc welding (GTAW)
(B) Oxy-fuel gas welding (OFW)
(C) Submerged arc welding (SAW)
(D) Self-shielded flux-cored (FCAW-S)

18 SAFETY

Under Cal/OSHA's permit-space rule, oxygen enrichment begins above what oxygen concentration by volume?

(A) 19.5%
(B) 25.0%
(C) 20.9%
(D) 23.5%

19 SAFETY

A 24-in.-wide electrical panel operates at 600 V or less and requires servicing while energized. Under Cal/OSHA, what is the minimum working-space width in front of it?

(A) 30 in.
(B) 36 in.
(C) 24 in.
(D) 18 in.

20 SAFETY

Under Cal/OSHA, what minimum illumination is required in an outdoor active construction area while work is in progress?

(A) 30 foot-candles
(B) 3 foot-candles
(C) 10 foot-candles
(D) 5 foot-candles

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Answer key and explanations

#	ANSWER	WHY
1	**B**	Too little current can leave the base metal unfused, while slow travel lets weld metal pile up and roll over the surface. This unfused lip at the weld toe is overlap.
2	**C**	A tungsten electrode that is too large for a low welding current can cause poor starting and arc wander. Select the electrode diameter for the current range.
3	**B**	Resistance heating follows H = I^2 R t where I is the welding current, R the resistance and t the weld time. With R and t unchanged, halving the current gives H_2 = (dfrac12)^2 H_1 = dfrac14 H_1 so only one-fourth of the original heat is produced. Because heat depends on the square of the current, current is the most powerful setting on a spot welder.
4	**B**	Zinc chloride is used in active acid soldering fluxes to remove oxides. Remove corrosive residues according to the flux manufacturer's cleaning instructions.
5	**A**	Manual GTAW normally uses constant current to limit current changes as arc length varies. Constant-speed wire-feeding setups normally use constant voltage for arc-length self-regulation.
6	**A**	The upper plate's exposed edge melts more readily than the lower plate's surface. Favoring the lower plate helps fuse the joint without melting away the upper edge.
7	**D**	A groove-weld performance test can qualify a welder for fillet welds within the code's applicable limits. A fillet-only test does not establish groove-weld qualification.
8	**A**	An MTR records the chemical analysis and mechanical test results for an identified heat or lot of metal. It supports checking the supplied material against its specification.
9	**A**	A weld symbol above the reference line specifies the other side of the joint. A symbol below the line specifies the arrow side.
10	**A**	For an intermittent fillet weld, the first number to the right is segment length; the number after the hyphen is pitch. Here, each segment is 3 in. long on 8 in. centers.
11	**B**	Types 316 and 317 contain molybdenum to improve corrosion resistance, particularly resistance to pitting. Type 317 generally contains more molybdenum than Type 316.
12	**A**	Use a clean stainless-steel wire brush dedicated to aluminum. Keeping it separate from tools used on steel helps prevent contamination of the weld joint.
13	**A**	UT offers good penetration and sensitivity to internal flaws in thick steel. It also avoids the radiation exclusion zone required for RT. Thin sections and coarse-grained castings are less favorable for conventional UT.
14	**B**	Discard low-hydrogen electrodes that have been soaked in water. Rebaking removes moisture picked up from the air; it cannot restore a coating damaged by soaking.
15	**A**	Keep the inner-cone tips about 1/16–1/8 in. above the steel. This positions the preheat flames close to the work without letting the cones touch it.
16	**A**	Preheat brings steel to its ignition temperature, typically about 1,600–1,800°F. The cutting-oxygen jet then oxidizes the steel and removes the oxides from the cut.

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#	ANSWER	WHY
17	**D**	FCAW-S generates substantial particulate fume from the consumable wire and its core ingredients. GTAW and SAW generally generate much less visible fume; fume quantity alone does not measure toxicity.
18	**D**	Section 5157 defines an oxygen-enriched atmosphere as more than 23.5% oxygen by volume. A reading within the oxygen limits alone does not establish that a confined space is safe to enter.
19	**A**	Cal/OSHA §2340.16 requires a working-space width of at least the equipment width or 30 in., whichever is greater. For this 24-in. panel, the minimum is 30 in.
20	**D**	Title 8 §1523 lists 5 foot-candles for outdoor active construction areas, along with concrete placement, excavation and waste areas, accessways and active storage areas. The 3-foot-candle value applies to low-activity general construction area lighting, 10 foot-candles to construction plants and shops, and 30 foot-candles to first-aid stations and offices. Federal OSHA's table assigns these values differently, so the Cal/OSHA rule is the one to use in California.

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