CSLB C-16 Fire Protection 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/c16-fire-protection-contractor

Scan to take it online

Exam topic areas and approximate weights

Planning and Estimating	25%
Installation of Underground Fire Main Systems	9%
Installation of Fire Protection Systems	36%
Maintenance and Repair of Fire Protection Systems	9%
Safety	21%

Test2Pro provides online prep only; CSLB and PSI handle exam scheduling, testing, licensing, and results. These are original practice questions, not real CSLB exam questions.

Questions

1 SAFETY

Under Title 8, which of these workers must wear a personal fall arrest, fall restraint or positioning system, assuming no other adequate fall protection is in place?

(A) A worker on a flat roof behind standard guardrails
(B) A worker 5 ft above the floor at an unprotected edge
(C) A worker 10 ft above grade at an unprotected leading edge
(D) A worker indoors at floor level, away from any opening

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2 SAFETY

Under Cal/OSHA, unless an excavation is entirely in stable rock, from what depth must a trench always have a protective system such as shoring, shielding or sloping?

(A) 5 feet
(B) 3 feet
(C) 6 feet
(D) 4 feet

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3 SAFETY

Under the Cal/OSHA Electrical Safety Orders, which portable electric tool may be used without an equipment grounding conductor?

(A) A tool plugged into a GFCI-protected receptacle
(B) A metal-cased tool used with a two-prong plug adapter
(C) A tool that will be used for less than one hour
(D) A listed tool marked as double-insulated

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4 SAFETY

Under Cal/OSHA, an extension ladder leans against a wall with a working length of 16 feet from its foot to the top support. How far from the wall should the foot of the ladder be placed?

(A) 2 feet
(B) 8 feet
(C) 5 feet 4 inches
(D) 4 feet

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5 INSTALLATION OF FIRE PROTECTION SYSTEMS

Aircraft hangars and flammable-liquid storage areas often need a large volume of water or foam-water solution applied over the whole area at once. Which system does this?

(A) Carbon dioxide total-flooding system
(B) Wet pipe system with standard spray sprinklers
(C) Single-interlock preaction system
(D) Deluge system

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6 INSTALLATION OF FIRE PROTECTION SYSTEMS

A seismic sway brace is installed to resist movement of a sprinkler main perpendicular to the pipe's axis. What type of brace is it?

(A) Transverse hanger
(B) Lateral brace
(C) Longitudinal brace
(D) Vertical restraint

7 INSTALLATION OF FIRE PROTECTION SYSTEMS

Which valve arrangement belongs in the main discharge line of a fire pump, listed in order going downstream from the pump?

(A) A check valve, then a listed indicating control valve
(B) A listed indicating control valve, then a check valve
(C) Two listed indicating control valves and no check valve
(D) A check valve only, with no control valve after it

8 INSTALLATION OF FIRE PROTECTION SYSTEMS

When the wet-chemical system protecting a restaurant's cooking line actuates, what must happen to the fuel or electric supply of the cooking equipment under the hood?

(A) It shuts off automatically and can be restored only by a manual reset
(B) It shuts off automatically and restores itself once the system is recharged
(C) It stays on, because only the hood exhaust fan is tied into the system
(D) It shuts off only if someone also pulls the manual actuation station

9 INSTALLATION OF FIRE PROTECTION SYSTEMS

What is the minimum size of the main drain connection for a 3-inch sprinkler system riser?

(A) 3/4 inch
(B) 1-1/4 inches
(C) 2 inches
(D) 1 inch

10 INSTALLATION OF FIRE PROTECTION SYSTEMS

A building in an area subject to freezing has a fire department connection on its sprinkler system. What must be installed on the piping between the FDC check valve and the outside hose inlets?

(A) A second check valve
(B) An air-release valve
(C) A pressure-relief valve
(D) An automatic drain valve

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11 INSTALLATION OF FIRE PROTECTION SYSTEMS

Under unobstructed construction, how far below the ceiling may the deflector of a standard spray upright or pendent sprinkler be located?

(A) 1 in. to 12 in.
(B) 4 in. to 6 in.
(C) 1 in. to 4 in.
(D) 6 in. to 18 in.

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12 MAINTENANCE AND REPAIR OF FIRE PROTECTION SYSTEMS

An inspection finds a sprinkler that is leaking, has lost the fluid from its glass bulb, or is physically damaged. What must be done with it?

(A) Clean it and leave it in service
(B) Have it bench-tested and reinstall it
(C) Replace it
(D) Repair it with the manufacturer's parts

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13 MAINTENANCE AND REPAIR OF FIRE PROTECTION SYSTEMS

A technician fully opens the inspector's test connection on a wet pipe sprinkler system, and no water comes out. What is the most likely cause?

(A) The waterflow switch retard is set too long
(B) The test orifice matches only one sprinkler
(C) The control valve is shut or the piping is blocked
(D) The system pressure is higher than normal

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14 PLANNING AND ESTIMATING

Before closeout, a fire protection contractor must pay for these inspections:
• County inspection: $140/hr for 4.5 hours
• Fire marshal inspection: $180/hr for 3 hours
• Final inspection: $250/hr for 2.5 hours
A supervisor paid $72/hr must accompany the inspectors during every inspection. What will the supervisor's time cost?

(A) $720.00
(B) $2,515.00
(C) $504.00
(D) $1,795.00

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15 PLANNING AND ESTIMATING

A furniture plant has an area where finished parts are dipped in open tanks of varnish and paint. Which NFPA 13 occupancy hazard classification applies to that area?

(A) Ordinary Hazard Group 2
(B) Extra Hazard Group 2
(C) Extra Hazard Group 1
(D) Ordinary Hazard Group 1

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16 PLANNING AND ESTIMATING

In a hydraulically calculated sprinkler system, where must the design area be located?

(A) Nearest the system riser
(B) At the center of the floor
(C) Where it is the most hydraulically demanding
(D) Where it is the least hydraulically demanding

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17 PLANNING AND ESTIMATING

A sprinkler system is designed by hydraulic calculation. Unless a sprinkler's listing requires more, what is the minimum operating pressure allowed at any sprinkler?

(A) 15 psi
(B) 5 psi
(C) 10 psi
(D) 7 psi

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18 PLANNING AND ESTIMATING

A suction tank must hold 45,000 gal of water. Using 1 ft^3 = 7.48 gal, what volume in cubic feet must the tank provide?

(A) 5,402.2 ft^3
(B) 6,016.0 ft^3
(C) 721.2 ft^3
(D) 6,944.4 ft^3

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19 INSTALLATION OF UNDERGROUND FIRE MAIN SYSTEMS

Where is a concrete thrust block placed at a horizontal bend in an underground fire service main?

(A) On top of the fitting, below the trench backfill
(B) Under the fitting, as a bedding pad
(C) Against undisturbed soil on the inside of the bend
(D) Against undisturbed soil on the outside of the bend

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20 INSTALLATION OF UNDERGROUND FIRE MAIN SYSTEMS

Under NFPA 24, at least how far from the building it protects should a private fire hydrant normally be placed?

(A) 20 feet
(B) 30 feet
(C) 10 feet
(D) 40 feet

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Answer key and explanations

#	ANSWER	WHY
1	**C**	Title 8 §1670(a) requires personal fall arrest, restraint or positioning systems for employees exposed to falls of more than 7 1/2 ft from the perimeter of a structure, unprotected sides and edges, leading edges, shaftways and openings, roof surfaces steeper than 7:12 or other slopes steeper than 40°, when they are not otherwise adequately protected. Guardrails, a 5 ft exposure and work away from edges do not trigger the rule.
2	**A**	Title 8 §1541.1(a)(1) requires every employee in an excavation to be protected from cave-ins by an adequate protective system, except where the excavation is entirely in stable rock, or is less than 5 feet deep and a competent person's examination of the ground shows no indication of a potential cave-in. From 5 feet down a protective system is therefore always required, and a shallower trench needs one too when there are signs of a possible cave-in.
3	**D**	Title 8 §2395.45 exempts listed or labeled portable tools protected by an approved system of double insulation from equipment grounding, provided the tools are distinctively marked. A separate exception covers listed tools likely to be used in wet and conductive locations when they are supplied through an isolating transformer with an ungrounded secondary of not over 50 volts. GFCI protection, a short period of use or a plug adapter does not replace the grounding conductor of a tool that needs one.
4	**D**	Title 8 §3276(e)(9) requires a non-self-supporting ladder to be set, where possible, so that the horizontal distance from the top support to the foot is one-quarter of the working length. Here 16 ÷ 4 = 4 feet. Placing the foot at one-half (8 ft) or one-third (5 ft 4 in) of the working length makes the ladder too flat and likely to slide.
5	**D**	A deluge system uses open sprinklers or nozzles on piping that is open to the atmosphere. When a detection system in the same area opens the deluge valve, water or foam-water solution discharges from every outlet at once, which suits fast-spreading fires in hangars and flammable-liquid areas. Wet pipe and preaction systems discharge only from the sprinklers that fuse, and carbon dioxide is a gaseous agent, not water or foam.
6	**B**	NFPA 13 defines a lateral brace as a sway brace intended to resist differential movement perpendicular to the axis of the system piping, and a longitudinal brace as one that resists movement parallel to the axis. A four-way brace combines both; restraint, which NFPA 13 treats as a lesser degree of resisting loads than bracing, only limits pipe movement; and a hanger carries the pipe's weight.
7	**A**	NFPA 20 requires a listed check valve (or a backflow preventer) in the pump discharge assembly and a listed indicating control valve on the fire protection system side of that check valve. The check valve keeps system pressure from driving water back through the pump, and the control valve downstream lets the pump and the check valve be isolated for service. A pressure relief valve, where one is required, is not in this run: it is connected between the pump and the discharge check valve.
8	**A**	CFC 904.14.2 requires actuation of a commercial cooking fire-extinguishing system to shut down the fuel or electric supply to the cooking equipment automatically, and the reset of that supply must be manual, so cooking cannot restart before someone has checked the fire is out. The manual pull station is only a second means of actuating the system; the shutdown does not depend on it. CFC 904.3.3 adds whatever other interlocks the system's design standard requires, such as ventilation controls.
9	**B**	NFPA 13 sizes the main drain by riser size: risers up to 2 in need a drain of at least 3/4 in; risers 2-1/2 in through 3-1/2 in need at least 1-1/4 in; risers 4 in and larger need at least 2 in. A 3 in riser therefore needs a drain of at least 1-1/4 in.

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#	ANSWER	WHY
10	**D**	NFPA 13 (2025) requires an approved automatic drain valve, commonly called an automatic drip or ball drip, on the short piping between the FDC check valve and the outside hose coupling in areas subject to freezing, located so that it can be inspected and tested. Water that leaks past the check valve or is left after the fire department pumps drains away, so this section does not freeze and burst. A second check valve, an air-release valve or a relief valve would leave the water standing in the pipe.
11	**A**	Under unobstructed construction, NFPA 13 places standard spray upright and pendent deflectors at least 1 in. and not more than 12 in. below the ceiling. 4 in. to 6 in. is the rule for sidewall sprinklers, and 1 in. to 4 in. is typical for residential sprinklers.
12	**C**	NFPA 25 requires replacing any sprinkler that shows leakage, physical damage or loss of fluid from its glass bulb, and any sprinkler whose corrosion, loading or paint not applied by the manufacturer is detrimental to its performance. The replacement must have the same characteristics, such as style, K-factor, temperature rating and deflector type. A leaking, damaged or emptied sprinkler cannot be cleaned, bench-tested or repaired and left in service.
13	**C**	The inspector's test connection simulates the flow from one sprinkler, so water should discharge as soon as it is opened. No flow means water is not reaching that part of the system: a control valve is closed or the piping is obstructed. A waterflow switch retard only delays the alarm, the test orifice is supposed to match one sprinkler, and higher pressure would increase the flow, not stop it.
14	**A**	The supervisor is present for all inspection hours: 4.5 + 3 + 2.5 = 10 hours, and 10 × $72 = $720.00. The inspectors' own fees (4.5 × $140 + 3 × $180 + 2.5 × $250 = $1,795.00) are a separate cost; adding the supervisor gives $2,515.00, and leaving out the fire marshal's 3 hours gives $504.00.
15	**B**	NFPA 13's annex lists flammable liquid spraying, flow coating, open oil quenching, solvent cleaning, and varnish and paint dipping as Extra Hazard Group 2 occupancies, because they involve moderate to substantial amounts of flammable or combustible liquids. Extra Hazard Group 1 covers very high combustible loads with little or no flammable or combustible liquid, such as sawmills or plywood and particleboard manufacturing.
16	**C**	NFPA 13 requires the design area to be the hydraulically most demanding area, usually the one most remote from the water supply. If the supply can meet the demand there, every other area of the system will also get at least the design density.
17	**D**	NFPA 13 sets 7 psi as the minimum operating pressure of any sprinkler in a hydraulically calculated system. Where a sprinkler's listing requires a higher minimum pressure, as for many extended coverage and storage sprinklers, the listing governs.
18	**B**	To turn gallons into cubic feet, divide by the number of gallons in a cubic foot: 45,000 ÷ 7.48 ≈ 6,016.0 ft³. Dividing by 8.33 (the weight of a gallon in pounds) gives 5,402.2, and dividing by 62.4 (the weight of a cubic foot in pounds) gives 721.2: both mix up weight and volume. 6,944.4 comes from a misremembered factor of 6.48.
19	**D**	A bearing thrust block transfers the thrust of the bend to the soil, so its bearing surface is placed against undisturbed soil on the side the thrust pushes, the outside of the bend. Where undisturbed soil cannot be reached, the fill behind the block is compacted to at least 90% Standard Proctor density. A block on top of the pipe, under it, or on the inside of the bend does not resist the thrust.
20	**D**	NFPA 24 (2025) 7.2.3 normally requires hydrants to be at least 40 feet from the buildings they protect, so they stay usable outside the area exposed to heat and collapse during a fire. Where a hydrant cannot be placed 40 feet away, Section 7.2.4 lets the authority having jurisdiction approve a closer hydrant or a wall hydrant.

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