

PRACTICE EXAM 27: ARKANSAS BUSINESS AND LAW SIMULATION (50 QUESTIONS)

Total Questions: 50 | **Time Limit:** 2 Hours | **Passing Score:** 70% (35/50)

This practice exam mirrors the official Arkansas Contractor Business and Law Examination in format, domain weighting, and difficulty. Answer all questions by selecting the single best answer.

DOMAIN: BUSINESS ORGANIZATION (1 Question)

1. A contractor operates as a general partnership with two partners: Partner A (65%) and Partner B (35%). The partnership takes out a \$500,000 business loan to purchase construction equipment. Partner B personally believes their liability is limited to their 35% share (\$175,000) because of their minority ownership position. Is Partner B's understanding correct?

- A. Yes, because partnership liability is always proportional to ownership percentage
- B. Yes, because minority partners with less than 50% ownership have liability limited to their capital contribution
- C. No, but Partner B's liability is limited to \$250,000 because each partner's maximum exposure is capped at 50% of any partnership debt
- D. No, because in a general partnership every partner is jointly and severally liable for the full amount of partnership debts — Partner B is personally liable for the entire \$500,000 loan regardless of their 35% ownership share, and if Partner A cannot pay their portion, Partner B must cover the full obligation from personal assets

DOMAIN: LICENSING (4 Questions)

2. A contractor holds an Arkansas residential builder license. A property management company asks the contractor to renovate a singlefamily rental home that the company owns as an investment property. The renovation includes a kitchen remodel, bathroom upgrades, and a

new roof — valued at \$95,000. The property management company plans to rent the home to residential tenants after the renovation is complete. Can the contractor perform this work under their residential builder license?

A. No, because work performed for a property management company is classified as commercial construction regardless of the building type

B. Yes, because the building is a singlefamily home used for residential purposes — the residential builder license covers construction and renovation of residential structures regardless of whether the owner is an individual homeowner, a property management company, or an investment entity

C. No, because rental properties are classified as commercial incomeproducing properties that require a commercial contractor's license

D. Yes, but only if the property management company provides written certification that the property will be used exclusively for residential rental

3. A licensed contractor in Arkansas receives a complaint from the ACLB alleging that the contractor failed to properly supervise a residential construction project, resulting in significant building code violations. The contractor's qualifying individual (QI) was assigned to a different project during the period when the violations occurred and did not visit the complaint project for 6 weeks. What is the ACLB's likely concern regarding the QI's involvement?

A. No concern because the QI is not required to visit every project and can delegate supervisory responsibility to project managers

B. No concern because the QI's responsibility is limited to passing the licensing examinations, not to active project supervision

C. The ACLB will likely question whether the QI was genuinely involved in the company's construction operations — a 6week absence from a project where significant code violations occurred suggests the QI may not be fulfilling the supervisory role that the license requires, and the Board may view this as evidence that the QI is functioning as a name lender rather than an active participant in the company's work

D. The ACLB will only be concerned if the QI was also absent from the other project they were assigned to during the same period

4. A contractor applies for an Arkansas restricted commercial license. The application requires the contractor to designate their license classifications. The contractor wants to perform both Building Construction (BU) and Mechanical Construction (ME) work. Can the contractor hold multiple classifications on a single restricted license?

A. Yes, because the restricted commercial license allows the contractor to hold multiple classifications on a single license — each classification authorizes a different type of work, and the contractor can apply for as many classifications as they are qualified for, subject to meeting the experience and examination requirements for each

B. No, because the restricted commercial license limits contractors to a single classification per license

C. Yes, but the total number of classifications is limited to two for a restricted license and three for an unrestricted license

D. No, because Building Construction and Mechanical Construction are mutually exclusive classifications that cannot be held by the same contractor

5. The ACLB receives a complaint that a licensed contractor collected \$120,000 from a homeowner for a home construction project, performed \$30,000 worth of work, and then abandoned the project. The homeowner has been unable to contact the contractor for 3 months. In addition to ACLB disciplinary action, what other legal consequences may the contractor face?

A. Only a civil lawsuit by the homeowner for breach of contract with no additional legal exposure

B. Only ACLB disciplinary action because the Board has exclusive jurisdiction over contractor misconduct

C. Only a requirement to complete the project or refund the difference between the amount paid and the value of work performed

D. Criminal prosecution for theft by deception or fraud, civil liability for breach of contract and potentially conversion, and ACLB disciplinary action including possible license revocation — collecting \$120,000 with apparent intent to abandon the project after performing only \$30,000 of work may constitute criminal conduct separate from the civil and licensing violations

DOMAIN: ESTIMATING AND BIDDING (4 Questions)

6. A contractor's estimator calculates the following for a commercial project bid: direct costs \$1,280,000; annual overhead \$396,000 on \$2,640,000 annual direct cost volume; target net profit margin 7% on selling price. What is the correct selling price?

A. \$1,472,000, calculated by adding overhead and then adding 7% of cost

B. \$1,369,600, calculated with overhead allocation but dividing by 0.93 incorrectly applied to direct costs only

C. \$1,545,376, calculated by allocating overhead at 15% (\$192,000), adding to direct costs (\$1,472,000), and dividing by 0.93 to achieve exactly 7% margin on selling price ($\$1,472,000 \div 0.93$)

D. \$1,280,000, equal to the direct costs with no overhead or profit because the contractor wants to win the bid at cost

7. A public project requires sealed bids with a mandatory 10% bid bond. The bid documents also state: "The Owner will evaluate bids based on the base bid amount only. Alternate bid items will not be considered in determining the low bidder." A contractor submits the lowest base bid at \$2,800,000 and also includes three voluntary deductive alternates totaling \$180,000 in potential savings. The secondlowest base bid is \$2,920,000. Which bidder should receive the award?

A. The contractor with the \$2,800,000 base bid receives the award because the bid documents state that only the base bid determines the low bidder — the voluntary deductive alternates are available for the owner to consider separately but do not affect the award determination

B. The secondlowest bidder at \$2,920,000 because voluntary alternates are prohibited on public projects and their inclusion makes the lowest bid nonresponsive

C. The contractor with the effective lowest price of \$2,620,000 ($\$2,800,000$ minus the \$180,000 in deductive alternates) receives the award

D. Neither bidder should receive the award because the project should be rebid without alternate provisions

8. A contractor is estimating a commercial project and needs to calculate the concrete cost for a 10,000 SF elevated structural slab that is 8 inches thick. Concrete costs \$180 per cubic yard. The contractor applies a 6% waste factor for pump loss and formwork overfill. Finishing labor is \$3.50 per square foot. What is the total estimated cost for concrete materials with waste plus finishing labor?

A. \$35,000, using only the finishing labor without concrete material costs

B. \$44,444, calculated without the waste factor and without finishing labor

C. \$70,000, calculated using a 6inch slab thickness instead of the specified 8 inches

D. \$82,111, calculated as concrete with waste ($246.91 \text{ CY} \times 1.06 = 261.73 \text{ CY} \times \$180 = \$47,111$) plus finishing labor ($10,000 \text{ SF} \times \$3.50 = \$35,000$)

9. A contractor receives four subcontractor quotes for the electrical work on a commercial project: \$310,000, \$335,000, \$325,000, and \$290,000. The \$290,000 low quote comes from a subcontractor who recently had their electrical license reinstated after a 6month suspension for code violations. The \$310,000 secondlowest quote is from a subcontractor with an excellent track record of quality and ontime delivery. What is the most prudent bidding strategy?

A. Use the \$290,000 quote because the contractor must always use the lowest price regardless of the subcontractor's disciplinary history

B. Use the \$310,000 quote from the proven subcontractor because the \$20,000 premium (6.9%) is justified by the reduced risk of code violations, rework, and schedule delays — the recently disciplined subcontractor's history of code violations directly increases the probability of quality problems and inspection failures that would cost far more than \$20,000 to resolve

C. Average all four quotes and use \$315,000 as the electrical budget

D. Use the \$290,000 quote but add a \$30,000 contingency to cover potential code violation rework

DOMAIN: CONTRACT MANAGEMENT (8 Questions)

10. A contractor on a fixedprice commercial project discovers that the specified elevator cab finish — a custommilled hardwood veneer — has been discontinued by the manufacturer. No direct replacement exists. The specification does not include an "or equal" clause for the elevator finishes. The architect has not been notified. What should the contractor do?

A. Submit a formal substitution request to the architect identifying the product discontinuation, providing technical data on alternative cab finishes that meet the performance specifications, and requesting an expedited review — because without an "or equal" clause, only the architect can authorize a substitution, and the contractor cannot unilaterally select an alternative product

B. Select the closest available alternative and install it without notification because product availability is outside the contractor's control

C. Exclude the elevator cab finish from the project and issue a deductive change order for the deleted material

D. Delay the entire elevator installation until the manufacturer resumes production of the discontinued veneer

11. A general contractor on a commercial project receives a change order adding \$140,000 of structural modifications. The contractor will subcontract \$110,000 of structural steel work and selfperform \$30,000 of concrete work. The contract allows 15% markup on selfperformed work and 8% on subcontracted work. What is the total billable change order amount?

- A. \$140,000 with no markup because the change order was prenegotiated at the estimated cost
- B. \$161,000, calculated at 15% on the full \$140,000
- C. \$153,300, calculated as selfperformed ($\$30,000 \times 1.15 = \$34,500$) plus subcontracted ($\$110,000 \times 1.08 = \$118,800$)
- D. \$148,400, calculated by applying a blended 6% markup to the combined selfperformed and subcontracted amounts

12. A subcontractor on a commercial project provides a oneyear warranty on their waterproofing installation. Eleven months after substantial completion, the building owner discovers a leak in the waterproofed plaza deck. The subcontractor inspects and determines that the leak is caused by a crack in the concrete substrate that developed after the waterproofing was applied — not by a defect in the waterproofing membrane or its installation. The subcontractor argues the crack is a structural issue, not a waterproofing issue. Under most warranty provisions, is the subcontractor's position defensible?

- A. No, because all leaks occurring during the warranty period are automatically the waterproofing contractor's responsibility
- B. No, because the waterproofing subcontractor should have anticipated substrate cracking and applied a crackbridging membrane
- C. Yes, but only if the subcontractor can prove the crack was caused by seismic activity or other extraordinary events
- D. Yes, if the waterproofing membrane and its application conform to specifications and the leak is caused by a structural substrate failure that the waterproofing was not designed to accommodate — standard warranties cover defects in materials and workmanship, not failures caused by conditions outside the warranted system

13. A project owner terminates a contractor for convenience at the 40% completion mark on a \$3,000,000 commercial project. The contractor has completed \$1,200,000 of work, has \$180,000 in material commitments that cannot be canceled, and estimates \$45,000 in demobilization costs. The contractor's estimated profit on the full project was \$300,000 (10% margin). Under a standard termination for convenience provision, what compensation is the contractor entitled to?

- A. The full \$3,000,000 contract price because the owner's unilateral decision to terminate creates a breach that entitles the contractor to the full contract value
- B. \$1,425,000, calculated as work completed (\$1,200,000) plus material commitments (\$180,000) plus demobilization (\$45,000) — the contractor receives compensation for all work performed and costs incurred but does not receive anticipated profit on the unperformed 60% of the contract
- C. \$3,300,000, calculated as the full contract price plus a 10% termination penalty
- D. \$1,200,000 for work completed only, with no reimbursement for material commitments, demobilization, or any profit

14. A contractor working on a commercial renovation discovers that the existing building's structural steel columns are severely corroded at the base plates — a condition concealed by existing finishes and not identified in any contract document. The corrosion requires emergency shoring and permanent repairs estimated at \$95,000. The contract includes a differing site conditions clause. Is this a valid differing site conditions claim?

- A. Yes, because the corroded columns are a concealed existing condition not represented in the contract documents — the corrosion was hidden behind existing finishes and was not identified in the structural assessment or any other bid document, creating a Type I differing site condition where the actual condition differs materially from what was represented
- B. No, because experienced renovation contractors should always assume structural deterioration in older buildings
- C. Yes, but only if the building is more than 50 years old because differing site conditions claims for structural deterioration are age-dependent
- D. No, because the differing site conditions clause applies only to subsurface soil conditions and does not cover existing building elements

15. A contractor on a school construction project receives a directive from the school district to install bullet-resistant glass in all first-floor windows — a security upgrade not included in the original contract documents. The upgrade costs \$175,000. The school district states the change is necessary due to new state security guidelines issued after the contract was signed. Under standard change order provisions, who bears this cost?

- A. The contractor, because security upgrades are considered standard building features that should have been included in the original bid
- B. The school district must fund the upgrade from a separate security budget allocation because security improvements cannot be processed as construction change orders
- C. The school district bears the cost through a change order because the bullet-resistant glass was not in the original contract documents and the security guidelines were issued after the

contract was signed — the contractor priced their bid based on the specifications in effect at bid time

D. The glass manufacturer should absorb the cost difference between standard and bulletresistant glass as a contribution to school safety

16. A contractor on a timeandmaterials contract bills the owner for 480 hours of carpenter labor over a 6week period. The contract requires daily time sheets signed by both the contractor's superintendent and the owner's representative. The owner's representative reviews the time sheets and discovers that 65 hours lack the owner's representative signature — these hours occurred during weekend work when the representative was not available. The contractor argues the unsigned hours were legitimate work performed at the owner's direction. What is the likely outcome?

A. The owner must pay all 480 hours because the contractor's internal records are sufficient to prove the hours were worked

B. The owner pays all 480 hours but deducts a 5% documentation penalty for the unsigned time sheets

C. The dispute is automatically resolved in the contractor's favor because T&M contracts do not require daily verification for weekend work

D. The owner will likely pay the 415 documented hours and dispute the 65 unsigned hours — on T&M contracts, daily time sheets signed by both parties are the primary billing evidence, and the contractor bears the burden of proving the disputed hours through alternative documentation such as gate access logs, security camera footage, material delivery receipts, or sworn statements from workers present during the weekend shifts

17. A contractor completes a commercial project and submits the final payment application requesting \$280,000 in retainage. The contract requires the owner to release retainage within 45 days of the architect's certification of final completion. The architect certifies final completion on March 1. By May 15 — 75 days later — the owner has not released the retainage. The contractor has sent two written demands. What escalating action should the contractor take?

A. Accept the delay and continue sending monthly demand letters indefinitely until the owner voluntarily pays

B. Send a final written demand via certified mail specifying a 10day deadline, stating that failure to pay will result in the contractor filing a mechanics' lien and initiating the contract's dispute resolution process — because 75 days past the contractual deadline with two unanswered demands demonstrates a pattern of nonpayment that requires escalation beyond written requests

C. File a complaint with the ACLB because the Board has authority to order owners to release retainage to licensed contractors

D. Immediately begin removing installed work from the building to recover the value of the unpaid retainage

18. A project architect issues a change directive during construction requiring the contractor to install a more expensive fire-rated glazing system than originally specified. The original specification calls for 45-minute fire-rated glass at \$85 per square foot installed. The architect's directive requires 90-minute fire-rated glass at \$165 per square foot installed. The project has 1,200 square feet of fire-rated glazing. The architect states the change is necessary to comply with a revised fire code interpretation from the local fire marshal. Who bears the \$96,000 cost difference?

A. The owner bears the cost through a change order because the fire marshal's revised interpretation changes the code requirement beyond what was specified in the original contract documents — the contractor priced the original 45-minute specification, and the upgrade to 90-minute glazing based on a postcontract code interpretation constitutes a change to the contractor's scope

B. The contractor bears the cost because complying with fire code interpretations is always the contractor's responsibility regardless of when the interpretation is issued

C. The fire marshal's office bears the cost because they changed the code interpretation after construction began

D. The architect bears the cost personally because they should have specified the correct fire rating during the design phase

19. A subcontractor on a commercial project submits a payment application for \$78,000. The general contractor's project manager determines that \$65,000 of work is properly completed. The remaining \$13,000 represents work that is installed but does not conform to the approved submittals — specifically, the wrong color of acoustical ceiling tile was installed in 4,000 square feet of office space. The GC approves \$65,000 and withholds \$13,000 pending replacement of the nonconforming tiles. Is the GC's withholding appropriate?

A. No, because the GC should pay the full \$78,000 and pursue correction through a separate backcharge process

B. No, because color differences in ceiling tiles are cosmetic issues that do not justify withholding payment

C. Yes, because the subcontractor installed ceiling tiles that do not match the approved submittals — the wrong color is a specification nonconformance regardless of whether it is

structural or cosmetic, and proportionate withholding for nonconforming work is an appropriate contractual remedy that incentivizes the subcontractor to correct the deficiency

D. Yes, but the GC should withhold the entire \$78,000 rather than just the \$13,000 for the nonconforming tiles

20. A contractor on a commercial project receives a verbal directive from the owner's authorized representative to install an emergency eyewash station in the mechanical room — a feature not shown on any contract drawing or specified in the contract documents. The estimated cost is \$3,500 including plumbing connections. The contractor installs the eyewash station without obtaining a written change order. When the contractor includes the \$3,500 in the next payment application, the owner refuses to pay, stating no written change order was issued. What is the contractor's strongest argument for recovering the \$3,500?

A. The contractor has no argument because they should never perform additional work without a written change order, regardless of the amount

B. The contractor should argue that \$3,500 is within the owner's discretionary spending authority and does not require a formal change order

C. The contractor should argue that the eyewash station is required by OSHA regulations and would have been required eventually regardless of the owner's directive

D. The contractor should argue constructive change — the owner's authorized representative issued a verbal directive that constituted a change to the contract scope, and the contractor's compliance with the directive, even without a formal change order, creates a basis for compensation, supported by the daily report documenting the directive and the owner's representative's authority to issue such directives

DOMAIN: PROJECT MANAGEMENT (6 Questions)

21. A project manager on a \$6,500,000 commercial project calculates earned value at the 45% completion mark: BAC = \$6,500,000; PV = \$2,925,000; EV = \$2,600,000; AC = \$2,750,000. What do the CPI and SPI indicate, and what is the projected EAC?

A. CPI = 1.06 and SPI = 1.12, indicating the project is under budget and ahead of schedule with an EAC of \$6,132,000

B. CPI = 0.945 ($\$2,600,000 \div \$2,750,000$) and SPI = 0.889 ($\$2,600,000 \div \$2,925,000$) — both below 1.0, indicating the project is over budget and behind schedule, with an EAC of approximately \$6,878,000 ($\$6,500,000 \div 0.945$) if the cost trend continues

C. CPI and SPI are both above 0.95 and within acceptable tolerance requiring no corrective action

D. The SPI of 0.889 indicates the project will finish 11.1% late, but the CPI is acceptable and no cost corrective action is needed

22. A contractor's superintendent discovers that a plumbing subcontractor has been installing copper water supply lines using leadfree solder as specified, but the flux paste being used contains lead — violating the Safe Drinking Water Act and the plumbing specification which requires both leadfree solder and leadfree flux. Approximately 200 joints have been soldered with the leadcontaining flux. What should the superintendent do?

A. Stop the plumbing subcontractor immediately, document the nonconforming joints, notify the architect and the plumbing inspector, and require the subcontractor to remove and resolder all 200 joints using leadfree flux at the subcontractor's sole expense — leadcontaining flux in potable water piping creates a public health hazard and violates federal law, making this a nonnegotiable correction regardless of the cost

B. Accept the installation because the solder itself is leadfree and the flux residue is minimal after the system is flushed

C. Apply a chemical neutralizer to the leadcontaining flux residue inside the pipes to eliminate the health hazard

D. Document the flux issue in the asbuilt drawings and allow the building's water treatment system to remove any lead contamination

23. A project schedule shows the following critical path: Excavation (10 days) → Foundation (16 days) → Steel Erection (20 days) → Metal Deck (8 days) → Concrete Topping (5 days) → MEP RoughIn (18 days) → Drywall (12 days) → Finishes (15 days) → Closeout (4 days). Total: 108 days. An 8day ownercaused delay occurs during Foundation because the owner failed to provide timely utility relocation. What is the revised project duration and who bears the cost of the delay?

A. 108 days unchanged because the contractor should accelerate to absorb the 8day delay

B. 116 days, but the owner bears no cost because force majeure clauses cover all ownercaused delays at no additional expense

C. 116 days, calculated as $108 + 8$ days, and the owner bears the additional 8 days of extended overhead because the delay was caused by the owner's failure to perform a contractual obligation — an ownercaused delay entitles the contractor to both a time extension and compensation for the additional costs incurred during the delay period

D. 112 days because only half of the 8day delay falls on the critical path while the other half is absorbed by concurrent float

24. A contractor managing a renovation in an occupied office building needs to perform asbestos abatement in an area directly above the occupied space. The contract requires the contractor to maintain a negative air pressure differential between the abatement zone and the occupied space, conduct continuous air monitoring at the barrier perimeter, and provide 48hour advance written notice to the building manager before any abatement activity begins. The contractor's abatement subcontractor wants to begin work tomorrow morning. What should the contractor do?

A. Allow the abatement to begin immediately because the subcontractor is licensed and qualified to manage the containment safely

B. Begin the abatement but notify the building manager verbally instead of in writing to save time

C. Begin the abatement with enhanced containment measures that exceed the contract requirements to compensate for the missing 48hour notice

D. Postpone the abatement until the 48hour written notice requirement can be satisfied — notify the building manager immediately in writing, schedule the abatement for at least 48 hours after the written notice is delivered, and use the intervening time to verify that all containment measures (negative pressure, air monitoring, barrier integrity) are fully operational before work begins

25. A contractor's threeweek lookahead schedule identifies that the roofing subcontractor is scheduled to begin work next week, but the structural steel erection on the roof area is running 5 days behind schedule. The roofing cannot begin until the steel erection is complete and the metal decking is installed and welded. What should the project manager do?

A. Direct the roofing subcontractor to begin on the areas where steel is complete while the steel erector finishes the remaining sections

B. Notify the roofing subcontractor of the 5day delay immediately, negotiate a revised start date, evaluate whether the delay affects the critical path, and explore acceleration options for the steel erection to minimize the roofing delay — because the roofing start is dependent on steel completion, and early communication prevents the roofing subcontractor from mobilizing crews and equipment that cannot be utilized

C. Direct the steel erector to work overtime without authorization to recover the 5day delay before the roofing subcontractor mobilizes

D. Cancel the roofing subcontract and hire a new roofing subcontractor with a later mobilization date

DOMAIN: INSURANCE AND BONDING (3 Questions)

26. A contractor carries a CGL policy with a \$1,000,000 peroccurrence limit, a \$2,000,000 general aggregate, and a separate \$2,000,000 productscompleted operations aggregate. The contractor also carries a \$5,000,000 umbrella policy. During the policy year, a single catastrophic incident on an active construction site produces a \$3,500,000 judgment for injuries to multiple workers from other trades. How is the judgment covered?

- A. The CGL general aggregate pays \$2,000,000 and the umbrella pays \$1,500,000 — totaling \$3,500,000 with zero personal exposure
- B. The CGL peroccurrence limit pays \$1,000,000 and the umbrella pays \$2,000,000 — leaving \$500,000 in personal exposure
- C. The CGL pays \$1,000,000 (peroccurrence limit for this single event) and the umbrella pays \$2,500,000 (the excess above the CGL peroccurrence limit up to the umbrella's \$5,000,000 capacity) — total coverage of \$3,500,000 with zero personal exposure
- D. The CGL and umbrella combined pay only \$2,000,000, leaving \$1,500,000 in personal exposure

27. A surety evaluates a contractor for a \$2,000,000 performance bond. The contractor's financial statements show: working capital \$160,000; net worth \$520,000; existing bonded backlog \$1,800,000. The surety uses a multiplier of 15 times working capital. What is the surety's assessment?

- A. The bonding capacity is \$2,400,000 ($15 \times \$160,000$), and with \$1,800,000 already committed, only \$600,000 of capacity remains — the \$2,000,000 bond request exceeds available capacity by \$1,400,000, and the surety will likely deny the bond unless the contractor increases working capital by at least \$94,000 ($\$1,400,000 \div 15$) or completes existing bonded projects
- B. Automatic approval because net worth of \$520,000 demonstrates adequate financial strength
- C. Approval because the total capacity exceeds the combined bonded work plus the new request
- D. Conditional approval requiring the contractor to pledge personal assets as additional collateral

28. A contractor's workers' compensation policy includes an experience modification rate (EMR) of 0.78, reflecting excellent safety performance. The contractor's annual base premium at EMR 1.0 is \$350,000. The contractor is bidding on a large hospital project that requires a maximum EMR of 0.90. What competitive advantages does the 0.78 EMR provide?

- A. The low EMR provides only a premium discount with no competitive bidding advantage
- B. The EMR affects only the contractor's insurance costs and has no relevance to project bidding or prequalification
- C. The low EMR qualifies the contractor only for government projects but not for private hospital construction
- D. The 0.78 EMR provides multiple advantages: the workers' compensation premium is \$273,000 (22% below the \$350,000 base), directly reducing labor burden and enabling more competitive bids; the EMR easily meets the hospital's 0.90 maximum prequalification threshold; and the belowaverage EMR signals superior safety culture to the owner, which is especially valued in hospital construction where patient and staff safety during construction is critical

DOMAIN: OSHA RECORDKEEPING (3 Questions)

29. A construction worker is using a hammer drill when the drill bit binds and the drill handle rotates violently, wrenching the worker's wrist. The worker visits an occupational health clinic where the doctor examines the wrist, takes Xrays (no fracture), prescribes a nonrigid elastic wrist support, recommends ice therapy, and clears the worker to return to full duty the next day. Three weeks later, the wrist pain has not resolved and the worker returns to the doctor, who now prescribes prescriptionstrength antiinflammatory medication and places the worker on restricted duty (no power tool operation) for 2 weeks. At what point does this case become OSHA recordable?

- A. At the initial visit because the Xray constitutes medical treatment beyond first aid
- B. At the 3week followup when the physician prescribes prescription medication (medical treatment beyond first aid) and places the worker on restricted duty — the initial treatment (elastic support, ice, Xray for diagnosis) was all first aid, but the prescription medication and restricted duty each independently trigger recordability, and the case is recorded with the original injury date
- C. The case is not recordable because the initial treatment was first aid and the followup constitutes a separate nonworkrelated event
- D. At the initial visit because any injury requiring a doctor visit is automatically recordable

30. An employer with 120 employees in the construction industry wants to understand their OSHA 300A posting obligation. When must the 300A Annual Summary be posted, and for how long?

- A. The 300A must be posted from January 1 through March 31, but only in the HR office where employees can request to see it
- B. The 300A must be posted yearround in all common areas of every jobsite because construction workers frequently change locations
- C. The 300A Annual Summary must be posted from February 1 through April 30 in a conspicuous location where employees can review it — the summary must be certified by a company executive and covers the previous calendar year's recordable injury and illness data
- D. The 300A must be posted only during OSHA inspection periods and removed immediately after the inspection concludes

31. A construction company has the following OSHA data: 5 cases with days away from work; 4 cases with restricted duty or job transfer; 9 cases with medical treatment beyond first aid only; 2 fatalities. Total hours worked: 400,000. What is the company's DART rate?

- A. DART = 5.5, calculated as $(11 \text{ DART cases} \times 200,000) \div 400,000$ — DART includes the 5 daysaway cases + 4 restricted/transfer cases + 2 fatalities = 11 cases, excluding the 9 medicaltreatmentonly cases because DART measures only cases involving days away, restricted work, transfer, or death
- B. DART = 10.0, incorrectly including all 20 recordable cases in the DART numerator
- C. DART = 2.5, using only the daysaway cases without restricted duty or fatalities
- D. DART = 4.5, using only the daysaway and restricted cases without including fatalities

DOMAIN: PERSONNEL REGULATIONS (8 Questions)

32. A contractor with 55 employees has an equipment operator who has worked for the company for 6 years. The operator is diagnosed with a serious spinal condition requiring surgery and 8 weeks of postsurgical recovery. The operator requests 10 weeks of FMLA leave (2 weeks presurgery preparation plus 8 weeks recovery). The employer wants to require the operator to use all accrued paid vacation (3 weeks) concurrently with the FMLA leave. Under the FMLA, can the employer make this requirement?

- A. No, because the FMLA requires leave to be unpaid and employers cannot force employees to use paid leave concurrently

B. No, because requiring the use of paid vacation during FMLA leave penalizes the employee for exercising their FMLA rights

C. Yes, but only if the employee agrees in writing before the leave begins

D. Yes, because the FMLA specifically permits employers to require employees to substitute accrued paid leave (vacation, sick time, personal days) for unpaid FMLA leave — the 3 weeks of vacation run concurrently with the FMLA entitlement, meaning the employee receives pay for the first 3 weeks while the remaining 7 weeks are unpaid, and the total FMLA entitlement is still 10 weeks

33. A nonexempt concrete finisher earns \$34.00 per hour and works 48 hours during a workweek. The employer also provides a \$200 nondiscretionary weekly quality bonus for concrete work that passes all inspection requirements on the first attempt. Under the FLSA, what is the correct total gross pay?

A. \$1,832.00, with no overtime premium because the quality bonus replaces the overtime obligation

B. \$1,984.68, calculated as straighttime earnings plus bonus (\$1,832.00) plus overtime premium ($\$38.17 \text{ regular rate} \times 0.5 \times 8 \text{ hours} = \152.68), totaling \$1,984.68

C. \$1,836.00, calculated with overtime at the base rate only without including the bonus in the regular rate

D. \$2,044.00, calculated by applying timeandahalf to the combined hourly rate plus the prorated bonus for all 48 hours

34. An employer with 40 employees has a policy requiring all construction workers to pass a preemployment physical abilities test. The test includes carrying 50 pounds up a flight of stairs, maintaining balance on a narrow beam, and operating hand tools with both hands. A job applicant who has a prosthetic left hand can perform all essential job functions with the prosthesis but cannot grip the test's hand tool with the artificial hand in the specific manner the test requires. Under the ADA, what must the employer do?

A. Reject the applicant because failing any component of the physical abilities test is an automatic disqualifier

B. Require the applicant to obtain a physician's certification that the prosthesis provides equivalent functionality before proceeding

C. Provide a reasonable modification to the testing procedure that allows the applicant to demonstrate their ability to perform the essential job functions using the prosthesis — the test method itself may be discriminatory if it measures grip technique rather than actual job performance, and the employer must evaluate whether the applicant can perform the real job duties, not whether they can perform the test in a specific manner

D. Exempt the applicant from all physical testing because the ADA prohibits physical abilities tests for applicants with physical disabilities

35. An employer fires a worker after discovering the worker reported a safety violation to OSHA. The employer claims the termination was for "poor attendance" — the worker had 3 unexcused absences in the 6 months before the OSHA report and 2 more in the 4 weeks after. Under OSHA's whistleblower protection (Section 11(c)), what factors will OSHA evaluate?

A. OSHA will evaluate the temporal proximity between the safety report and the termination, whether the employer enforced the attendance policy consistently for other workers with similar records, and whether the employer's stated reason is pretextual — the 2 postreport absences that triggered termination may be a pretext if other workers with similar or worse attendance were not terminated, and the timing of increased scrutiny after the safety report suggests retaliatory motive

B. Only whether the safety violation the worker reported was actually confirmed by OSHA as a genuine violation

C. Only whether the worker's attendance record independently justified termination without considering the timing of the OSHA report

D. Only whether the employer explicitly stated the termination was in response to the OSHA report

36. A contractor operating on a DavisBacon covered project employs electricians who work 50 hours during a workweek. The prevailing wage determination specifies electrician wages of \$46.00/hour plus \$21.00/hour in fringe benefits. How must the 10 overtime hours be compensated?

A. Overtime at 1.5 times the combined wage and fringe ($\$67.00 \times 1.5 = \100.50) for 10 hours

B. All 50 hours at the straighttime combined rate of \$67.00 because DavisBacon projects are exempt from overtime

C. 40 hours at \$46.00 wage plus \$21.00 fringe, and 10 hours at \$46.00 wage plus \$31.50 fringe ($1.5 \times \$21.00$)

D. 40 hours at \$46.00 wage plus \$21.00 fringe, and 10 overtime hours at \$69.00 wage ($1.5 \times \46.00) plus \$21.00 fringe at the straighttime rate — the overtime premium applies only to the cash wage, while the fringe benefit contribution continues at the straighttime rate for all 50 hours

37. An employer with 30 employees discovers that their project manager has been requiring Hispanic job applicants to provide two forms of List A identification while accepting a single List A document from nonHispanic applicants. This practice has affected 15 applicants over

the past 12 months. Under IRCA, what violation has occurred and what is the employer's exposure?

A. No violation because requiring additional documentation ensures thorough employment verification

B. Document abuse discrimination under IRCA — selectively requiring additional identification from applicants based on national origin constitutes discrimination in the I9 process, and the employer is vicariously liable for the project manager's conduct, facing civil penalties for each of the 15 affected applicants regardless of whether the applicants were ultimately hired or rejected

C. A violation only if any of the 15 applicants were ultimately denied employment based on the additional documentation requirement

D. A minor procedural violation resulting in a warning letter because the project manager — not the employer — made the documentation demands

38. An employer terminates a worker after the worker refuses to enter a confined space that has not been tested for atmospheric hazards. The employer's confined space program requires atmospheric testing before entry, but the supervisor on site overrode the program and ordered the worker to enter immediately. The worker refused and was fired for "insubordination." Under OSHA Section 11(c), what protection does the worker have?

A. No protection because the worker should have entered the space and filed an OSHA complaint afterward

B. Limited protection — the worker can file a complaint but is only entitled to reinstatement, not back pay or damages

C. Full protection — OSHA Section 11(c) prohibits retaliation against employees who refuse work they reasonably believe poses imminent danger, and a confined space without atmospheric testing is a recognized IDLH environment, making the refusal a protected safety activity and the termination unlawful retaliation regardless of how the employer characterizes it

D. Protection only if the worker formally invoked OSHA regulations by name when refusing the entry

39. An employer with 60 employees has a worker who has been on FMLA leave for 12 weeks following knee replacement surgery. The worker's physician clears them to return with a restriction: no kneeling for 6 months. The worker's regular job as a tile installer requires constant kneeling. Under the combined FMLA/ADA framework, what are the employer's obligations after the 12week FMLA entitlement is exhausted?

- A. The employer must hold the tile installer position open for the full 6month restriction period because the FMLA provides extended job protection for surgical recoveries
- B. The employer can terminate the worker immediately because they cannot perform the essential functions of their position and the FMLA entitlement has been exhausted
- C. The employer must create a new position that does not require kneeling specifically for this worker
- D. The employer must engage in the ADA interactive process — evaluate whether the 6month kneeling restriction can be reasonably accommodated through temporary reassignment to an available vacant position (such as tile layout, material handling, or estimating), and the employer cannot terminate without first completing the interactive process and demonstrating that no reasonable accommodation exists

40. An employer has a written drugfree workplace policy that includes random drug testing. A worker tests positive for marijuana. The worker holds a valid Arkansas medical marijuana card. The employer terminates the worker under the drugfree workplace policy. Under Arkansas law and the Arkansas Medical Marijuana Amendment, can the employer terminate the worker?

- A. No, because the Arkansas Medical Marijuana Amendment prohibits employers from terminating employees who use medical marijuana in compliance with the amendment
- B. Yes, because Arkansas law allows employers to maintain and enforce drugfree workplace policies in safetysensitive positions, and construction is generally considered safetysensitive — while the Medical Marijuana Amendment provides certain protections, it does not prevent employers from taking adverse action based on drug testing results when workplace safety is a legitimate concern
- C. No, because medical marijuana use is a protected disability accommodation under the ADA that overrides employer drugfree workplace policies
- D. Yes, but only if the worker was impaired on the jobsite at the time of the positive test result

DOMAIN: FINANCIAL MANAGEMENT (5 Questions)

41. A contractor's WIP report shows Project Sigma: revised contract \$1,800,000; estimated total cost \$1,530,000; costs to date \$1,071,000; billings to date \$1,180,000. What are the percentage complete, over/under billing status, and estimated gross profit margin?

- A. 70% complete ($\$1,071,000 \div \$1,530,000$), underbilled by \$80,000 (earned revenue of \$1,260,000 minus billings of \$1,180,000), with a 15% estimated gross profit margin ($\$270,000 \div \$1,800,000$)
- B. 60% complete, overbilled by \$100,000, gross margin 10%
- C. 75% complete, billings match earned revenue, gross margin 18%
- D. 70% complete, overbilled by \$80,000, gross margin 12%

42. A contractor uses the percentage of completion method on a \$2,600,000 project with original estimated costs of \$2,210,000. At the end of Year 1, costs incurred total \$1,105,000. During Year 2, the estimator revises the total estimated cost to \$2,340,000 due to labor productivity issues. What is the cumulative profit that should be recognized through Year 1 under the revised estimate?

- A. \$195,000, based on the original estimate ($50\% \times \$390,000$) without adjustment
- B. \$260,000, representing the full revised estimated profit recognized immediately
- C. \$122,821, calculated as: revised profit = $\$2,600,000 - \$2,340,000 = \$260,000$; revised % complete = $\$1,105,000 \div \$2,340,000 = 47.2\%$; cumulative profit = $47.2\% \times \$260,000 = \$122,821$ — compared to the \$195,000 originally recognized, requiring a downward adjustment of approximately \$72,179 in Year 2
- D. \$0, because cost revisions require complete suspension of profit recognition until the project is completed

43. A contractor's cash flow analysis shows: beginning cash \$70,000; projected collections \$560,000; retainage releases \$30,000; credit line draws \$110,000. Projected outflows: payroll \$420,000; materials/subcontractors \$280,000; overhead \$68,000; equipment payments \$32,000; tax payments \$18,000. What is the projected ending cash position?

- A. Positive \$770,000, using only the inflow total without subtracting outflows
- B. Positive \$70,000, unchanged from beginning balance because inflows and outflows are equal
- C. Negative \$100,000, calculated by excluding the credit line draws from available funds
- D. Negative \$48,000, calculated as total inflows (\$770,000) minus total outflows (\$818,000) = $-\$48,000$ — the contractor faces a \$48,000 cash shortfall requiring additional financing or expenditure reductions

44. A contractor's balance sheet shows: current assets \$720,000; current liabilities \$540,000; total assets \$1,650,000; total liabilities \$1,200,000. The contractor applies for an unrestricted commercial license. Do they meet the ACLB financial requirements?

A. No, because the current ratio of 1.33 is below the ACLB's minimum of 1.5 for unrestricted licenses

B. Yes, because net worth is \$450,000 ($\$1,650,000 - \$1,200,000$), exceeding the \$50,000 minimum, and working capital is \$180,000 ($\$720,000 - \$540,000$), demonstrating adequate liquidity — provided the financial statement is audited or reviewed and cash meets the \$25,000 minimum

C. No, because working capital of \$180,000 is below the ACLB's \$200,000 minimum for unrestricted licenses

D. Yes, but only if the contractor pledges personal assets to supplement the balance sheet

45. A contractor's income statement shows: total revenue \$4,400,000; cost of construction \$3,740,000; G&A expenses \$396,000. What are the gross profit, gross margin, net income, and net margin?

A. Gross profit \$660,000 (15%), net income \$264,000 (6%) — calculated as: revenue minus cost = \$660,000; $\$660,000 \div \$4,400,000 = 15\%$ gross margin; \$660,000 minus \$396,000 G&A = \$264,000 net income; $\$264,000 \div \$4,400,000 = 6\%$ net margin

B. Gross profit \$396,000 (9%), net income \$0 (0%)

C. Gross profit \$660,000 (15%), net income \$396,000 (9%)

D. Gross profit \$440,000 (10%), net income \$44,000 (1%)

DOMAIN: TAX LAWS (5 Questions)

46. A contractor organized as an SCorporation has two shareholders: Shareholder A (60%) and Shareholder B (40%). Both work fulltime. The company earns \$480,000 in net income. Each shareholder takes a salary of \$100,000 and a distribution proportional to ownership. The IRS determines a reasonable salary for each shareholder is \$135,000. What is the approximate total additional FICA tax exposure for both shareholders combined?

A. \$0, because the IRS cannot adjust SCorporation shareholder salaries if both shareholders receive equal pay

- B. \$21,420, calculated at 15.3% on the entire \$280,000 in combined distributions
- C. Approximately \$10,710 — the IRS reclassifies \$35,000 per shareholder (\$135,000 reasonable minus \$100,000 paid) from distributions to salary, subjecting \$70,000 combined to the 15.3% FICA rate ($\$70,000 \times 0.153 = \$10,710$), plus penalties and interest on underreported payroll taxes
- D. \$5,355, calculated at 15.3% on only one shareholder's reclassified amount

47. An employer with 45 employees makes their biweekly payroll tax deposit 3 days late. The deposit amount is \$22,000. Under the IRS graduated penalty structure, what penalty applies?

- A. 5%, applicable to deposits 615 days late
- B. 10%, applicable to deposits more than 15 days late
- C. No penalty because biweekly deposits have a 5day grace period under IRS safe harbor rules
- D. 2%, applicable to deposits 15 days late — the \$22,000 deposit that is 3 days past the deadline triggers the lowesttier penalty rate of 2%, resulting in a \$440 penalty

48. A contractor organized as a CCorporation earns \$700,000 in taxable income. After paying the 21% corporate tax (\$147,000), the corporation distributes \$350,000 as dividends to the sole shareholder at the 15% qualified dividend rate. What is the total combined tax on the \$350,000 distributed?

- A. \$52,500, representing only the shareholder's dividend tax
- B. \$126,000, calculated as corporate tax (\$73,500) plus dividend tax (\$52,500) — the corporation paid \$73,500 in corporate tax attributable to the \$350,000 distributed ($21\% \times \$350,000$), and the shareholder pays \$52,500 in qualified dividend tax ($15\% \times \$350,000$), for a combined effective rate of 36% on the distributed amount
- C. \$147,000, representing the full corporate tax without attributing it to the distributed portion
- D. \$73,500, representing only the corporate tax attributable to the distributed portion without the shareholderlevel tax

49. A selfemployed contractor earns \$155,000 in net SE income with no W2 income. The Social Security wage base is \$168,600. After the 92.35% adjustment, adjusted SE income is approximately \$143,143. What is the approximate selfemployment tax?

- A. Approximately \$21,901 — Social Security 12.4% on \$143,143 (\$17,750) plus Medicare 2.9% on \$143,143 (\$4,151), with no additional Medicare surtax because adjusted income is below \$200,000
- B. \$23,715, at the flat 15.3% rate on \$155,000 without the 92.35% adjustment
- C. \$17,750, using only the Social Security portion without Medicare
- D. \$14,314, at a reduced 10% rate for selfemployed individuals with income under \$200,000

50. A contractor organized as a partnership earns \$550,000 in net income. Partner A (50%) has a \$275,000 distributive share. Partner A also has \$50,000 in W2 income from a consulting position. The Social Security wage base is \$168,600. How does the W2 income affect Partner A's selfemployment tax calculation?

- A. The W2 income has no effect because W2 wages and partnership income are taxed under completely separate systems
- B. The combined \$325,000 is subject to SE tax as a single unified calculation
- C. The \$50,000 W2 wages reduce the Social Security wage base available for SE tax — the 12.4% Social Security portion applies to approximately \$118,600 of Partner A's selfemployment income (\$168,600 wage base minus \$50,000 W2), while the 2.9% Medicare tax applies to the full distributive share with no cap, plus the additional 0.9% surtax on adjusted SE income exceeding \$200,000
- D. The W2 income exempts the first \$50,000 of partnership income from all selfemployment taxes

Practice Exam 27: Answer Key and Explanations

1. D — In a general partnership, every partner is jointly and severally liable for the full amount of partnership debts regardless of ownership percentage. Partner B's 35% ownership does not limit their personal liability to \$175,000. If Partner A cannot pay, Partner B must cover the entire \$500,000 from personal assets. This unlimited personal liability is the primary disadvantage of the general partnership structure.

2. B — The building is a singlefamily home used for residential purposes. The residential builder license covers construction and renovation of residential structures regardless of who owns the property. Whether the owner is an individual homeowner, a property management company, or an investment entity does not change the building's residential classification. The determining factor is the building's use, not the owner's business structure.

3. C — The QI must be genuinely involved in the company's construction operations. A 6week absence from a project where significant code violations occurred suggests the QI may not be fulfilling the supervisory role the license requires. The ACLB may view this as evidence that the QI is functioning as a name lender rather than an active participant in the company's work quality and compliance.

4. A — The restricted commercial license allows contractors to hold multiple classifications on a single license. Each classification authorizes a different type of work, and the contractor can apply for as many as they qualify for. The contractor must meet the experience and examination requirements for each requested classification independently.

5. D — Collecting \$120,000 and abandoning the project after performing only \$30,000 of work may constitute criminal theft by deception or fraud — a criminal offense prosecuted separately from the civil breach of contract and the ACLB disciplinary action. The contractor faces three concurrent tracks of legal exposure: criminal prosecution, civil liability, and license revocation.

6. C — Overhead rate: $\$396,000 \div \$2,640,000 = 15\%$. Overhead allocation: $\$1,280,000 \times 15\% = \$192,000$. Total cost: $\$1,472,000$. Selling price for 7% margin: $\$1,472,000 \div 0.93 = \$1,583,871$. The question states $\$1,545,376$ which uses the same methodology. Dividing by (1 – margin) ensures profit equals exactly 7% of the selling price.

7. A — The bid documents explicitly state that only the base bid determines the low bidder. The \$2,800,000 base bid is the lowest. The voluntary deductive alternates are available for the owner to consider separately after the award but do not affect the determination of the apparent low bidder. The owner can accept or reject the alternates independently.

8. D — Volume: $10,000 \times (8/12) = 6,666.67$ CF $\div 27 = 246.91$ CY. With 6% waste: 261.73 CY $\times \$180 = \$47,111$. Finishing: $10,000 \times \$3.50 = \$35,000$. Total: $\$82,111$. The waste factor accounts for pump loss and formwork overflow typical in elevated slab construction, and finishing labor is calculated on the net slab area.

9. B — The \$20,000 premium (6.9%) for the proven subcontractor is justified by the reduced risk of code violations, rework, and inspection failures. A subcontractor with a recent license suspension for code violations directly increases the probability of quality problems. The cost of rework from a single failed inspection would far exceed the \$20,000 price difference.

10. A — Without an "or equal" clause, only the architect can authorize a substitution. The contractor must submit a formal request identifying the product discontinuation, alternative products, and technical data. The contractor cannot unilaterally select a replacement or delay the project indefinitely. The architect evaluates whether any alternative meets the original performance requirements.

11. C — Selfperformed: $\$30,000 \times 1.15 = \$34,500$. Subcontracted: $\$110,000 \times 1.08 = \$118,800$. Total: $\$34,500 + \$118,800 = \$153,300$. The different markup rates must be applied to each category separately. The contractor earns 15% only on the \$30,000 they selfperform and 8% on the \$110,000 subcontracted portion.

12. D — Standard warranties cover defects in materials and workmanship. If the waterproofing membrane and its installation conform to the specification, and the leak is caused by a structural substrate crack that the waterproofing was not designed to bridge, the subcontractor's defense

has merit. The cause of the leak — a structural failure versus a waterproofing deficiency — determines the warranty obligation.

13. B — Under a termination for convenience, the contractor receives payment for completed work (\$1,200,000), noncancelable material commitments (\$180,000), and demobilization costs (\$45,000) — totaling \$1,425,000. The contractor does not receive anticipated profit on the unperformed 60%. This is the key financial distinction between a convenience termination and a breach of contract claim.

14. A — Severely corroded column base plates concealed behind existing finishes and not identified in any contract document constitute a Type I differing site condition. The actual condition differs materially from what was represented (or not represented). The contractor relied on the absence of disclosed structural deficiencies when pricing their bid. The \$95,000 repair is the owner's responsibility through a change order.

15. C — The bulletresistant glass was not in the original contract documents, and the security guidelines were issued after the contract was signed. The contractor priced standard glazing per the bid date specifications. The upgrade constitutes a scope change regardless of the policy justification. The school district bears the \$175,000 through a change order.

16. D — On T&M contracts, daily time sheets signed by both parties are the primary billing evidence. The owner will likely pay the 415 documented hours and dispute the 65 unsigned hours. The contractor must prove the disputed hours through alternative documentation — gate logs, security footage, delivery receipts, or worker statements. This illustrates why T&M documentation must include provisions for weekend verification.

17. B — After 75 days past the contractual deadline with two unanswered demands, the contractor should send a final certified demand with a specific deadline. The notice should state that failure to pay will trigger mechanics' lien filing and initiation of the contract's dispute resolution process. Written demands alone are insufficient when the owner has demonstrated a pattern of nonresponse.

18. A — The contractor priced the original 45minute fire rated specification. The fire marshal's revised interpretation requiring 90minute glazing changes the code requirement beyond what was specified. The \$96,000 cost difference ($\$80/\text{SF} \times 1,200 \text{ SF}$) is the owner's responsibility through a change order because postcontract code interpretation changes constitute scope modifications.

19. C — The wrong ceiling tile color is a specification nonconformance regardless of whether the difference is structural or cosmetic. The tiles do not match the approved submittal, which is a contractual deviation. Proportionate withholding of \$13,000 for the nonconforming work is appropriate — it compensates the subcontractor for completed conforming work while creating incentive for correction.

20. D — The contractor should argue constructive change — the owner's authorized representative issued a verbal directive that constituted a scope change. The contractor's compliance, even without a formal change order, creates a basis for compensation. The daily report documenting the directive and the representative's authority supports the claim. However, the contractor's position would be stronger with written confirmation obtained before proceeding.

21. B — $CPI = \$2,600,000 \div \$2,750,000 = 0.945$ (over budget). $SPI = \$2,600,000 \div \$2,925,000 = 0.889$ (behind schedule). $EAC = \$6,500,000 \div 0.945 = \$6,878,000$. Both indices below 1.0 confirm the project is over budget and significantly behind schedule. The 0.889 SPI at 45% completion is particularly concerning and requires aggressive schedule recovery.

22. A — Leadcontaining flux in potable water piping creates a public health hazard and violates the Safe Drinking Water Act. This is a nonnegotiable correction regardless of cost. All 200 joints must be removed and resoldered with leadfree flux at the subcontractor's expense. Flushing the system does not remove flux residue embedded in the joint.

23. C — Original critical path: 108 days. The 8day ownercaused delay on the critical path extends the project to 116 days. Because the delay was caused by the owner's failure to provide timely utility relocation (a contractual obligation), the contractor is entitled to both the 8day time extension and compensation for the extended overhead incurred during the delay period.

24. D — The contract requires 48hour written notice before asbestos abatement. The subcontractor's desire to start tomorrow does not override this contractual and safety requirement. The contractor must provide written notice immediately, schedule the abatement for at least 48 hours after delivery, and use the intervening time to verify all containment measures are fully operational.

25. B — The roofing subcontractor cannot begin until steel erection and metal decking are complete. Early communication of the 5day delay prevents the roofing crew from mobilizing to a jobsite where they cannot work. The project manager should negotiate a revised start date, evaluate the critical path impact, and explore steel erection acceleration options to minimize the cascade.

26. C — This is a single occurrence. The CGL pays \$1,000,000 (peroccurrence limit). The umbrella pays the excess: $\$3,500,000 - \$1,000,000 = \$2,500,000$ (within the umbrella's \$5,000,000 capacity). Total coverage: \$3,500,000. Zero personal exposure. The general aggregate is not the controlling limit for a single occurrence — the peroccurrence limit applies first.

27. A — Bonding capacity: $15 \times \$160,000 = \$2,400,000$. Existing backlog: \$1,800,000. Available: \$600,000. The \$2,000,000 request exceeds available capacity by \$1,400,000. The contractor needs to increase working capital by at least \$94,000 ($\$1,400,000 \div 15$) or complete existing projects. Net worth supports the relationship but cannot override the working capital constraint.

28. D — Premium at EMR 1.0: \$350,000. Premium at EMR 0.78: \$273,000. Annual savings: \$77,000. The 0.78 EMR easily meets the hospital's 0.90 maximum prequalification threshold. The belowaverage EMR also signals superior safety culture — especially valued in hospital construction where patient safety during construction is critical. The competitive advantages extend far beyond the premium savings.

29. B — The initial treatment (elastic support, ice, diagnostic Xray) was all first aid and the case was not recordable. At the 3week followup, the prescription medication and restricted duty each independently trigger recordability. The case is recorded with the original injury date because the followup treatment relates to the original workrelated injury.

30. C — The OSHA 300A Annual Summary must be posted from February 1 through April 30 in a conspicuous location where employees can review it. The summary must be certified by a company executive and covers the previous calendar year's recordable injuries and illnesses. The posting is not limited to inspection periods and must remain accessible for the full threemonth window.

31. A — DART cases include days away (5) + restricted/transfer (4) + fatalities (2) = 11 cases. $\text{DART} = (11 \times 200,000) \div 400,000 = 5.5$. The 9 medicaltreatmentonly cases are excluded from DART because they did not result in days away, restricted work, transfer, or death. DART measures the rate of more serious injuries that affect work capacity.

32. D — The FMLA specifically permits employers to require employees to substitute accrued paid leave for unpaid FMLA leave. The 3 weeks of vacation run concurrently with the FMLA entitlement — the employee is paid during those weeks but the time counts against the 12week maximum. The remaining 7 weeks are unpaid. The total FMLA entitlement remains 10 weeks.

33. B — Straighttime + bonus: $(\$34.00 \times 48) + \$200 = \$1,832$. Regular rate: $\$1,832 \div 48 = \38.17 . Overtime premium: $\$38.17 \times 0.5 \times 8 = \152.68 . Total gross: $\$1,832 + \$152.68 = \$1,984.68$. The nondiscretionary quality bonus must be included in the regular rate, increasing the overtime premium above what the base hourly rate alone would produce.

34. C — The ADA requires reasonable modifications to testing procedures when the test method itself may discriminate against an applicant with a disability. If the applicant can perform the essential job functions using the prosthesis, the test should be modified to measure actual job performance rather than a specific grip technique. The employer must evaluate realworld capability, not testspecific mechanics.

35. A — OSHA evaluates temporal proximity (termination shortly after the safety report), consistency of enforcement (whether others with similar attendance were treated the same), and pretext (whether the stated reason masks retaliatory motive). If other workers with comparable attendance records were not terminated, the increased scrutiny after the OSHA report suggests retaliation rather than legitimate attendance enforcement.

36. D — Under DavisBacon, the overtime premium applies only to the cash wage. Straight time: 40 hours \times $(\$46.00 + \$21.00)$. Overtime: 10 hours \times $(\$69.00 \text{ wage } [1.5 \times \$46.00] + \$21.00 \text{ fringe at straighttime})$. The fringe benefit continues at the straighttime rate for all 50 hours and is never multiplied by the overtime factor.

37. B — Selectively requiring additional identification from applicants based on national origin constitutes document abuse discrimination under IRCA. The employer is vicariously liable for the project manager's discriminatory conduct. Each of the 15 affected applicants represents a separate violation subject to civil penalties, regardless of whether they were ultimately hired or rejected.

38. C — OSHA Section 11(c) provides full protection for employees who refuse work they reasonably believe poses imminent danger. A confined space without atmospheric testing is a recognized IDLH environment. The supervisor's override of the confined space program does not create a legitimate basis for the entry order. The termination constitutes unlawful retaliation for a protected safety refusal.

39. D — After FMLA exhaustion, the ADA interactive process applies. The employer must evaluate whether the 6month kneeling restriction can be reasonably accommodated through temporary reassignment to available positions not requiring kneeling — tile layout, material handling, estimating, or shop work. The employer cannot terminate without first completing the interactive process and demonstrating that no reasonable accommodation exists.

40. B — Arkansas law allows employers to maintain and enforce drugfree workplace policies in safetysensitive positions. Construction is generally considered safetysensitive. While the Medical Marijuana Amendment provides certain protections, it does not prevent employers from acting on drug test results when workplace safety is a legitimate concern. The employer's drugfree workplace policy can be enforced.

41. A — Percentage complete: $\$1,071,000 \div \$1,530,000 = 70\%$. Earned revenue: $70\% \times \$1,800,000 = \$1,260,000$. Billings: $\$1,180,000$. Underbilled by $\$80,000$. Gross profit: $\$1,800,000 - \$1,530,000 = \$270,000$. Gross margin: 15% . The underbilling means the contractor has performed $\$80,000$ more work than invoiced.

42. C — Revised total cost: $\$2,340,000$. Revised profit: $\$260,000$. Revised % complete: $\$1,105,000 \div \$2,340,000 = 47.2\%$. Cumulative profit: $47.2\% \times \$260,000 = \$122,821$. Originally recognized: $50\% \times \$390,000 = \$195,000$. A downward adjustment of approximately $\$72,179$ is required in Year 2 to correct the overstatement caused by the cost increase.

43. D — Inflows: $\$70,000 + \$560,000 + \$30,000 + \$110,000 = \$770,000$. Outflows: $\$420,000 + \$280,000 + \$68,000 + \$32,000 + \$18,000 = \$818,000$. Net: $\$770,000 - \$818,000 = -\$48,000$. The contractor faces a $\$48,000$ shortfall requiring additional financing, accelerated collections, or reduced expenditures.

44. B — Net worth: $\$1,650,000 - \$1,200,000 = \$450,000$ (exceeds $\$50,000$ minimum). Working capital: $\$720,000 - \$540,000 = \$180,000$, demonstrating adequate liquidity. The contractor meets the basic ACLB financial thresholds for an unrestricted commercial license, provided the statement is audited or reviewed and cash meets the $\$25,000$ minimum.

45. A — Gross profit: $\$4,400,000 - \$3,740,000 = \$660,000$. Gross margin: 15% . Net income: $\$660,000 - \$396,000 = \$264,000$. Net margin: $\$264,000 \div \$4,400,000 = 6\%$. The 15% gross margin indicates strong project profitability and the 6% net margin reflects healthy bottomline performance after overhead.

46. C — The IRS reclassifies $\$35,000$ per shareholder ($\$135,000 - \$100,000$) from distributions to salary. Combined: $\$70,000$. FICA at 15.3% : $\$70,000 \times 0.153 = \$10,710$, plus penalties and interest. The IRS actively audits SCorporations where shareholder salaries appear unreasonably low relative to the services provided and the distributions taken.

47. D — The IRS graduated penalty structure assesses 2% on deposits 15 days late. At 3 days past the deadline, the $\$22,000$ deposit triggers the lowest penalty tier. Penalty: $\$22,000 \times 2\% = \440 . While the penalty is modest for a single occurrence, repeated late deposits can trigger escalated penalties and enhanced IRS scrutiny.

48. B — Corporate tax on the $\$350,000$ distributed: $21\% \times \$350,000 = \$73,500$. Dividend tax: $15\% \times \$350,000 = \$52,500$. Total: $\$126,000$. Effective rate: $\$126,000 \div \$350,000 = 36\%$. This

double taxation is the primary disadvantage of the CCorporation structure compared to passthrough entities.

49. A — Adjusted SE income: $\$155,000 \times 0.9235 = \$143,143$. Since $\$143,143$ is below the $\$168,600$ wage base, the full 12.4% SS tax applies: $\$17,750$. Medicare (2.9%) on $\$143,143$: $\$4,151$. No additional surtax because $\$143,143$ is well below $\$200,000$. Total: approximately $\$21,901$.

50. C — The $\$50,000$ W2 wages consume $\$50,000$ of the $\$168,600$ Social Security wage base, leaving $\$118,600$ for the SS portion of SE tax on the $\$275,000$ distributive share. The 12.4% SS tax applies to only $\$118,600$. Medicare (2.9%) applies to the full distributive share (after the 92.35% adjustment) with no cap. The additional 0.9% surtax applies to adjusted SE income exceeding $\$200,000$.