

# PRACTICE EXAM 20: ARKANSAS BUSINESS AND LAW SIMULATION (50 QUESTIONS)

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**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 C-Corporation with two shareholders: Shareholder A owns 60% and Shareholder B owns 40%. The corporation earns \$500,000 in net taxable income. After paying corporate income tax at 21%, the corporation distributes all remaining after-tax profits as dividends to the shareholders. A tax advisor recommends converting to an S-Corporation to eliminate one layer of taxation. If the company converts to an S-Corporation, how would the \$500,000 be taxed differently?

A. The S-Corporation would pay the same 21% corporate tax but the shareholders would not pay dividend tax on their distributions

B. The S-Corporation would pay a reduced corporate tax rate of 10% and shareholders would pay individual tax on dividends at the capital gains rate

C. The S-Corporation would be tax-exempt, and shareholders would pay no tax on distributions because pass-through entities are not subject to federal income tax

D. The S-Corporation would pay no entity-level federal income tax — the \$500,000 would pass through to the shareholders' individual returns via Schedule K-1, with Shareholder A reporting \$300,000 and Shareholder B reporting \$200,000, eliminating the double taxation that occurs when C-Corporation profits are taxed at the corporate level and again as dividends

**DOMAIN: LICENSING (4 Questions)**

2. A contractor holds an unrestricted commercial license with Building Construction (BU) and Highway Construction (HY) classifications. The contractor wants to add a Mechanical Construction (ME) classification to perform HVAC and plumbing work on their own projects rather than subcontracting it. What must the contractor do to add the ME classification?

A. File a completely new license application with separate fees, references, and financial statements for the ME classification

B. Apply to the ACLB to add the Mechanical Construction classification to their existing license — which may require demonstrating experience in mechanical construction, passing any additional classification-specific examination requirements, and paying the applicable fee

C. Automatically receive the ME classification after holding the BU and HY classifications for 5 or more consecutive years

D. Obtain a separate mechanical trade license from the Arkansas Department of Health instead of adding a classification through the ACLB

3. A homeowner hires a contractor to build a \$160,000 addition to their single-family home. The contractor holds a residential builder license. During construction, the contractor discovers that the addition's foundation encroaches 18 inches into a utility easement shown on the property survey. The contractor did not review the survey before starting the foundation work. Who bears responsibility for this error?

A. The contractor bears primary responsibility because a competent residential builder should review the property survey and identify easement boundaries before beginning foundation work — failing to check the survey before excavation is a professional oversight that may require costly foundation modifications

B. The homeowner bears sole responsibility because property surveys are the owner's document and the contractor has no obligation to review them

C. The local building department bears responsibility because they should have flagged the easement encroachment during the permit review process

D. The architect or designer bears sole responsibility because foundation location relative to easements is exclusively a design function

4. A contractor's license renewal requires submission of an updated financial statement. The contractor's fiscal year ends December 31, and their license renewal date is April 1. The contractor submits a financial statement dated November 30 of the previous year — 4 months before the renewal date. The ACLB requires financial statements to be dated within 12 months of submission. Is this financial statement acceptable?

- A. No, because financial statements for license renewals must be dated within 6 months of the renewal date
- B. No, because financial statements must always be dated within 90 days of the renewal application
- C. Yes, because the November 30 date is within 12 months of the April 1 renewal date (approximately 4 months old), satisfying the currency requirement
- D. Yes, but only if the contractor provides a supplemental letter from their CPA confirming no material changes since the statement date

5. A licensed contractor in Arkansas performs a \$75,000 commercial renovation for a restaurant. After completion, the restaurant owner discovers multiple building code violations including improperly sized electrical circuits, non-code-compliant plumbing connections, and fire-rated assemblies that do not meet the required fire rating. The owner files complaints with both the local building department and the ACLB. What is the relationship between the building department's enforcement action and the ACLB's disciplinary process?

- A. The ACLB must wait for the building department to complete its enforcement before beginning its own investigation
- B. The building department's findings are binding on the ACLB and automatically determine the ACLB's disciplinary outcome
- C. The ACLB cannot take action because code enforcement is exclusively within the building department's jurisdiction
- D. The building department and the ACLB operate independently — the building department enforces building codes through its own process (requiring corrections, issuing stop-work orders, revoking permits), while the ACLB separately evaluates whether the code violations constitute grounds for licensing disciplinary action (fines, suspension, revocation), and both processes can proceed simultaneously

**DOMAIN: ESTIMATING AND BIDDING (4 Questions)**

6. A contractor is preparing a competitive bid for a municipal fire station. The estimator completes the quantity takeoff and applies unit prices to calculate direct costs of \$2,180,000. The contractor's overhead rate is 13%. The contractor targets a net profit margin of 6% on the selling price. However, the contractor also knows that three strong competitors are bidding the project and the winning bid is likely to be around \$2,650,000 based on market intelligence. What strategic decision must the contractor make?

- A. Submit the bid at the calculated price regardless of competitive intelligence because undercutting competitors compromises quality
- B. The contractor must decide whether to bid at their calculated price (\$2,622,340 — cost plus overhead divided by 0.94) or sharpen their bid to compete near the \$2,650,000 market expectation, potentially accepting a lower margin — this is a fundamental business judgment balancing profitability against the probability of winning the work
- C. Submit the bid at \$2,650,000 regardless of their internal cost calculation because matching the expected winning price is the only viable strategy
- D. Withdraw from the bidding because the competitive market leaves insufficient margin for a profitable project

Let me verify: Direct costs  $\$2,180,000 \times 1.13$  overhead =  $\$2,463,400 \div 0.94 = \$2,620,638$ . Close to  $\$2,622,340$  with rounding. The market intelligence of  $\$2,650,000$  is slightly above the calculated price.

7. A contractor reviews a set of specifications for a public library project and finds contradictory requirements. Section 07200 (Thermal Insulation) specifies R-30 batt insulation in the exterior walls, while Section 07210 (Building Insulation) specifies R-19 batt insulation in the same exterior walls. The contractor needs to price the insulation for their bid. What should the estimator do?

- A. Price the R-19 insulation because lower-numbered specification sections take precedence over higher-numbered sections
- B. Average the two values and price R-24.5 insulation to split the difference between the conflicting specifications
- C. Submit an RFI to the architect before the bid deadline identifying the conflict between the two specification sections and requesting clarification — then price whichever requirement the architect confirms, or if no response is received before the deadline, price the more stringent (and more expensive) R-30 requirement to avoid underpricing the work
- D. Price the R-19 insulation because the less expensive option produces a more competitive bid

8. A contractor estimates painting 28,000 SF of interior walls. One coat primer at 350 SF/gallon (\$28/gallon) and two coats finish paint at 300 SF/gallon (\$42/gallon). Labor at \$44/hour, production rate 200 SF/hour for all coats combined. What is the total estimated cost?

- A. \$16,240, calculated as primer (80 gallons  $\times$  \$28 = \$2,240) plus finish paint (186.67 gallons  $\times$  \$42 = \$7,840) plus labor (140 hours  $\times$  \$44 = \$6,160)
- B. \$10,080, calculated using only the finish paint and labor without the primer cost

- C. \$14,000, calculated by using a single coat of finish paint instead of the specified two coats
- D. \$22,400, calculated by applying the labor rate to all three coat applications separately rather than using the combined production rate

9. A public project bid form includes a section for listing "Voluntary Alternates" — items the bidder proposes to substitute that could reduce the project cost. The contractor identifies that substituting a domestic steel joist manufacturer for the specified imported joists would save \$45,000 with no performance difference. The bid documents do not prohibit voluntary alternates. Should the contractor include this voluntary alternate in their bid?

- A. No, because voluntary alternates are prohibited on all public projects under competitive bidding law
- B. No, because substituting domestic materials for imported materials violates federal trade agreements that govern public construction procurement
- C. Yes, because the voluntary alternate provides a cost savings with no performance compromise and demonstrates the contractor's value engineering capability
- D. The contractor should include the voluntary alternate as a separate line item below the base bid, clearly labeled as a proposed cost savings — this allows the owner to evaluate the substitute on its merits while maintaining the integrity of the base bid, and the owner can accept or reject the alternate independently of the base bid award

10. A contractor's estimator discovers during the quantity takeoff that the architectural floor plan shows 42 interior doors, but the door schedule lists only 38 doors. The hardware schedule references 42 doors. The estimator has limited time before the bid deadline. What is the most prudent estimating approach?

- A. Price 38 doors because the door schedule is the most specific document and typically governs when conflicts exist between schedules and plans
- B. Price 42 doors to match the floor plan and hardware schedule — when two of three documents agree on a quantity and the third shows a lower number, the estimator should price the higher quantity to avoid underpricing, and submit an RFI documenting the discrepancy before or immediately after the bid
- C. Price 40 doors as a compromise between the conflicting quantities to hedge the risk
- D. Exclude all interior doors from the bid until the conflict is resolved by the architect

**DOMAIN: CONTRACT MANAGEMENT (8 Questions)**

11. A contractor on a commercial project begins change order work while price negotiations are ongoing. The signed change order states "Price to be negotiated." The contractor tracks all costs on a daily basis with verification by the owner's representative. After completion, the contractor's documented costs total \$165,000 while the owner offers \$120,000. What position does the contractor's daily cost documentation create?

- A. No advantage because the change order's blank price field means the owner determines the final price unilaterally
- B. Minimal advantage because daily time sheets are internal contractor documents that carry no weight in price negotiations
- C. Strong negotiating position because the contractor's daily cost documentation — verified by the owner's representative — provides contemporaneous, third-party-verified evidence of the actual cost, which is the standard basis for pricing change order work performed on a force account or T&M basis when a fixed price was not agreed upon in advance
- D. The documentation is irrelevant because the contractor should have refused to begin work until a fixed price was agreed upon

12. A project architect issues a bulletin during construction that adds a requirement for all exterior windows to include impact-resistant glazing — a feature not shown in the original contract documents. The architect states the change is necessary to comply with a new building code provision that took effect after the contract was signed. The contractor estimates the upgraded glazing will add \$92,000 to the project cost. Under the Spearin Doctrine and standard contract provisions, who should bear this cost?

- A. The owner should bear the cost through a change order because the contractor priced the bid based on the codes in effect on the bid date — code changes enacted after contract execution constitute a change to the contractor's scope that was not included in the original pricing, and the Spearin Doctrine's implied warranty of design adequacy applies to the code edition in effect when the contract was signed
- B. The contractor should bear the cost because contractors have a duty to anticipate all future code changes and include allowances in their bids
- C. The cost should be split equally between the owner and the contractor because code changes are a shared risk
- D. The architect should bear the cost personally because they failed to anticipate the code change during the design phase

13. A general contractor on a \$4,500,000 commercial project discovers at the 80% completion mark that their concrete subcontractor has been systematically over-billing. The subcontractor billed \$620,000 but only \$480,000 of work is actually in place — a \$140,000 over-billing. The general contractor included the subcontractor's inflated numbers in their own applications to the owner without independent verification. What are the consequences for the general contractor?

A. No consequences because the subcontractor is solely responsible for the accuracy of their own billing

B. Consequences limited to the 10% retainage withheld on the over-billed amount

C. The general contractor faces no liability if they immediately correct the billing in the next payment application

D. The general contractor faces significant consequences — they have a duty to verify subcontractor progress before including it in their own applications to the owner, and passing through inflated billing may constitute a breach of the prime contract's payment provisions, expose the GC to repayment demands, and potentially trigger fraud allegations if the pattern is found to be knowing or negligent

14. A contractor working on a hospital renovation project encounters an unexpected structural condition — the existing concrete floor slab is 4 inches thinner than shown on the original building plans provided with the bid documents. The thinner slab requires additional structural reinforcement costing \$55,000 before the contractor can install the new mechanical equipment. The contract includes a differing site conditions clause. Is the contractor entitled to additional compensation?

A. No, because experienced renovation contractors should always verify existing structural conditions before beginning work

B. Yes, because the existing slab thickness shown on the original building plans constitutes a contract document representation, and the actual condition (4 inches thinner) differs materially from what was represented — this is a classic Type I differing site condition entitling the contractor to additional compensation through a change order

C. No, because the differing site conditions clause applies only to subsurface soil conditions, not to existing building structural elements

D. Yes, but only if the contractor conducted independent structural testing before starting the renovation work

15. A subcontractor on a commercial project submits a payment application for \$95,000. The general contractor approves \$80,000, withholding \$15,000 for work the GC considers incomplete. The subcontractor disagrees and argues all work is complete. The subcontract does

not include a dispute resolution clause. What is the subcontractor's best immediate course of action?

- A. Stop all work on the project until the full \$95,000 is paid because the general contractor's withholding is arbitrary
- B. Accept the \$80,000 and forfeit the \$15,000 to maintain the business relationship with the general contractor
- C. Send a formal written notice to the general contractor documenting the dispute, identifying the specific work items the subcontractor considers complete, requesting a joint inspection to resolve the disagreement, and reserving the right to pursue the \$15,000 through legal remedies if the dispute cannot be resolved — while continuing to perform remaining contract work to avoid a breach
- D. File a mechanics' lien immediately without attempting to resolve the dispute through direct communication

16. A project owner issues a termination for cause notice to a contractor, alleging the contractor failed to maintain adequate manpower on the project. The contractor has documentation showing they maintained full crews throughout the project but were delayed by 45 days of owner-caused design changes. If the termination is found to be wrongful, what is the typical legal consequence?

- A. A wrongful termination for cause is converted to a termination for convenience — the contractor receives payment for completed work, termination costs (demobilization, subcontractor charges, material commitments), and a reasonable profit on work performed, but not anticipated profit on the unperformed portion of the contract
- B. The contractor is reinstated to complete the project under the original contract terms
- C. The owner must pay the full remaining contract value including the contractor's anticipated profit on all unperformed work
- D. The wrongful termination is voided entirely and the contract continues as if the termination never occurred

17. A construction contract specifies that all disputes "shall first be submitted to the architect for an initial decision within 30 days." A dispute arises over \$125,000 in contested change orders. The contractor submits the dispute to the architect. After 45 days, the architect has not issued a decision. The contractor wants to escalate to the next dispute resolution step (mediation). Can the contractor proceed without the architect's decision?

- A. No, the contractor must wait indefinitely for the architect to issue a decision because the contract requires the architect's initial decision before any escalation
- B. No, but the contractor can request the owner to replace the architect with a neutral third-party decision maker
- C. Yes, but only if the contractor withdraws the disputed change orders and resubmits them through a different contractual process
- D. Yes, because the architect failed to issue a decision within the contractual 30-day timeframe — the architect's failure to act within the specified period may be treated as a denial of the claim or may entitle the contractor to proceed to the next dispute resolution step, depending on the specific contract language

18. A contractor working on a school renovation project is contractually required to maintain full building operations during construction, including functional HVAC, electrical, plumbing, and fire protection systems in all occupied areas. The contractor needs to shut down the electrical system for 6 hours to install a new electrical panel that will serve the renovated wing. The shutdown will affect the entire building, including occupied classrooms. How should the contractor manage this situation?

- A. Shut down the system during school hours and notify the building administrator that temporary disruptions are unavoidable during renovation work
- B. Coordinate with the school administration to schedule the 6-hour shutdown during a school break, weekend, or non-instructional day — and if no such window exists within the schedule, provide temporary power through a generator to maintain essential services in the occupied areas during the shutdown period
- C. Delay the electrical panel installation indefinitely until the school year ends to avoid any disruption to occupied areas
- D. Install the panel without shutting down the existing system by working on live circuits to maintain continuous service

19. A contractor receives a written directive from the owner's representative during construction to install an additional elevator in the building — a major scope addition not included in the original contract. The directive states: "Please proceed immediately with installation of a passenger elevator in the east stairwell per the attached sketch. Formal change order to follow." The contractor estimates the elevator installation will cost \$280,000. What should the contractor do before proceeding?

- A. Respond in writing acknowledging the directive, submit a detailed change order proposal for \$280,000 with schedule impact analysis, and request written authorization to proceed — because a \$280,000 addition represents a major scope change that requires formal

documentation, and the phrase "formal change order to follow" does not constitute authorization to proceed without an agreed price

B. Proceed immediately because the owner's written directive constitutes a binding change order regardless of the pending formal documentation

C. Refuse the directive entirely because elevator installations require a separate construction contract

D. Proceed with the elevator installation and bill the owner after completion based on the contractor's actual costs plus markup

20. A contractor on a public project submits a monthly payment application including \$45,000 for stored materials (structural steel fabricated and stored at the steel fabricator's yard, not yet delivered to the site). The contract allows payment for materials "stored at the site or at other locations approved by the Owner." The owner has not formally approved the fabricator's yard as an approved storage location. Can the owner reject payment for the stored materials?

A. No, because steel fabrication yards are automatically considered approved storage locations under standard public construction contracts

B. No, because the materials have been fabricated and the contractor has paid for them, creating an obligation for the owner to reimburse regardless of storage location

C. Yes, because the contract requires owner approval for off-site storage locations, and the contractor did not obtain this approval before requesting payment — the contractor should have requested formal approval of the fabricator's yard as a storage location before including the stored materials in the payment application

D. Yes, but only if the stored materials are valued at more than \$25,000 because smaller amounts are automatically approved

21. A project schedule shows that substantial completion is 30 days away. The architect conducts a pre-substantial completion inspection and identifies 220 punch list items — significantly more than expected for a project at this stage. Many items involve incomplete work rather than minor corrections. The contractor argues they need an additional 45 days to address the list. What does a punch list of this size and nature indicate about the project's actual completion status?

A. The large number of items is normal for pre-substantial completion inspections and does not indicate a problem

B. The punch list indicates the project may not actually be ready for substantial completion — a pre-substantial completion punch list should contain minor corrections, not incomplete work

items, and 220 items suggests the contractor may need to continue active construction rather than transitioning to punch list corrections

C. The architect is being overly thorough and should reduce the list to a maximum of 50 items

D. A punch list with 220 items containing incomplete work suggests the project is not substantially complete — substantial completion means the work is complete enough for the owner to occupy and use the building for its intended purpose, and extensive incomplete work contradicts this standard, meaning the contractor should continue active construction before requesting a substantial completion inspection

### **DOMAIN: PROJECT MANAGEMENT (6 Questions)**

22. A contractor's project manager discovers that the HVAC subcontractor has installed return air ductwork using galvanized sheet metal instead of the specified aluminum sheet metal. The installed ductwork has been concealed above the suspended ceiling on two floors. The architect has not been notified. The galvanized duct costs less than aluminum but does not meet the specification. What should the project manager do?

A. Leave the galvanized duct in place because it is functionally equivalent to aluminum and replacing it would be costly

B. Notify the architect of the substitution immediately and request a formal determination on whether the galvanized ductwork is acceptable — if the architect rejects the substitution, the HVAC subcontractor must remove and replace the concealed ductwork with the specified aluminum at the subcontractor's expense, because the unauthorized substitution was the subcontractor's decision

C. Accept the substitution and issue a credit to the owner for the cost difference between galvanized and aluminum duct

D. Document the substitution in the as-built drawings and address the issue during the warranty period if problems arise

23. A project schedule shows two parallel activity chains converging at a single milestone: Chain A has 15 days remaining to the milestone, and Chain B has 22 days remaining to the same milestone. A 5-day delay occurs on Chain A. What is the impact on the milestone date?

A. No impact on the milestone date — Chain B at 22 days is the controlling (longer) path to the milestone, and Chain A with the 5-day delay now takes 20 days, which is still shorter than Chain B's 22 days, so Chain B continues to govern the milestone date

- B. The milestone is delayed by 5 days because any delay to any chain approaching a milestone extends it by the full delay amount
- C. The milestone is delayed by 3 days because the delay pushes Chain A past Chain B by 3 days
- D. Both chains become critical at 22 days and neither can absorb any further delay

24. A contractor's superintendent reviews the three-week look-ahead schedule and identifies that a critical concrete pour is scheduled for next Tuesday. The weather forecast shows sustained winds of 25-35 mph on Tuesday. The concrete specification limits wind speed during placement to 15 mph for exterior exposed concrete because high winds accelerate surface evaporation and cause plastic shrinkage cracking. What should the superintendent decide?

- A. Proceed with the pour and apply an evaporation retarder to the surface to counteract the wind effects
- B. Proceed with the pour but add extra water to the mix to compensate for the evaporation loss caused by the wind
- C. Postpone the pour to a day with winds below 15 mph as specified, document the weather forecast and the specification limitation in the daily report, and adjust the schedule accordingly — placing concrete in wind conditions exceeding the specification limit creates a quality risk that cannot be adequately mitigated and may result in cracking that requires costly remediation
- D. Proceed with the pour during the early morning hours when wind speeds are typically lower and complete before the high winds begin

25. A project manager on a commercial building project calculates the following earned value metrics at the 65% completion mark: BAC = \$8,000,000; EV = \$5,200,000; AC = \$5,600,000; PV = \$5,500,000. What do the CPI and SPI indicate, and what is the Estimate at Completion if the current trends continue?

- A. CPI = 1.08 and SPI = 1.05, indicating the project is under budget and ahead of schedule
- B. CPI = 0.93 and SPI = 1.05, indicating the project is over budget but ahead of schedule
- C. CPI and SPI are both below 1.0, indicating the project is both behind schedule and over budget
- D. CPI = 0.929 ( $\$5,200,000 \div \$5,600,000$ ) and SPI = 0.945 ( $\$5,200,000 \div \$5,500,000$ ) — both below 1.0, indicating the project is over budget and behind schedule, with an EAC of approximately \$8,612,000 ( $\$8,000,000 \div 0.929$ ) if the current cost trend continues

26. A contractor is managing a renovation project in an occupied building. The contract requires the contractor to provide 48-hour advance notice to the building manager before any utility shutdowns. The contractor's plumbing subcontractor needs to shut down the domestic water supply for 4 hours to connect a new water line. The subcontractor notifies the contractor on Monday morning that they are ready for the shutdown and wants to proceed immediately. What should the contractor do?

A. Notify the building manager immediately and schedule the shutdown for Wednesday at the earliest — complying with the 48-hour advance notice requirement even though it delays the plumbing work by 2 days, because the contractual notice requirement protects building occupants and violating it could constitute a contract breach

B. Allow the shutdown to proceed immediately because 4 hours is a minor disruption that does not require 48-hour notice

C. Schedule the shutdown for Tuesday (24 hours) as a compromise between the contractual requirement and the subcontractor's readiness

D. Cancel the shutdown entirely and reroute the water line to avoid interrupting the domestic water supply

27. A project owner sends the contractor a letter expressing concern about the quality of the masonry work on the project. The letter states: "The mortar joints appear inconsistent and the brick coursing is not level. Please have an independent masonry consultant evaluate the work and provide a report within 14 days." The contractor believes the masonry meets the specifications. How should the contractor respond?

A. Ignore the letter because the architect — not the owner — is the party responsible for evaluating the quality of the work

B. Immediately tear down and rebuild the questioned masonry to avoid a confrontation with the owner

C. Respond in writing acknowledging the owner's concern, arrange for the independent masonry evaluation as requested, and cooperate with the review — because addressing quality concerns promptly and transparently demonstrates professionalism, and an independent evaluation that confirms the work meets specifications protects the contractor more effectively than a defensive refusal

D. File a formal complaint against the owner for interfering with the contractor's work and undermining the architect's authority

28. A contractor's daily report from Friday contains the following entry: "Received verbal notice from the building inspector at 2:30 PM that the fire-rated wall assembly in the east corridor failed inspection. Inspector stated the assembly does not match the UL-listed detail

specified in the drawings. Specifically, the fire-rated drywall was installed with standard drywall screws instead of the fine-thread drywall screws required by the UL listing. Inspector requires correction before concealment." Why is the screw type discrepancy significant enough to fail the inspection?

A. It is not significant — the inspector is being unnecessarily technical about a minor hardware difference

B. Standard screws and fine-thread screws perform identically in fire-rated assemblies and the inspector's rejection is incorrect

C. The screw type only matters for sound-rated assemblies, not fire-rated assemblies

D. Fire-rated wall assemblies are tested and certified as complete systems — every component must match the UL-listed detail exactly, including screw type, spacing, and length, because altering any component voids the fire rating certification and the assembly can no longer be represented as meeting the required fire resistance, creating a life safety deficiency

### **DOMAIN: INSURANCE AND BONDING (3 Questions)**

29. A contractor's CGL policy has a per-occurrence limit of \$1,000,000 and a products-completed operations aggregate of \$2,000,000. The contractor completes a hotel project. Two years later, guests in 15 rooms report ceiling damage caused by defective waterproofing the contractor installed on the roof. The property damage claims from the 15 rooms total \$180,000, and the hotel owner claims \$400,000 in lost revenue during repairs. What coverage issues arise?

A. The CGL does not cover any claims arising from the contractor's completed work

B. The products-completed operations coverage responds to the property damage claims (\$180,000) from the completed work, but the \$400,000 lost revenue claim is consequential/economic loss that may not be covered by the CGL policy — CGL typically covers bodily injury and property damage, not the insured's loss of business income, though the hotel's claim as a third party for their economic loss has a more complex coverage analysis

C. Both the property damage and lost revenue are fully covered under the per-occurrence limit without any coverage questions

D. The CGL policy covers only the roof waterproofing repair cost and excludes all damage to other building components

30. A surety evaluates a contractor for a \$4,000,000 bonding line. The contractor's financial statements show: working capital \$310,000; net worth \$820,000; annual revenue \$6,500,000; current backlog \$4,200,000. The surety's underwriting multiplier is 15 times working capital. What is the surety's likely assessment?

A. The bonding capacity based on working capital alone is \$4,650,000 ( $15 \times \$310,000$ ), which supports a \$4,000,000 line — however, the surety will also evaluate whether the \$820,000 net worth, the \$6,500,000 revenue base, and the \$4,200,000 existing backlog are consistent with the requested capacity, since the backlog already approaches the capacity limit and adding \$4,000,000 would nearly double the bonded exposure

B. The surety will automatically approve the \$4,000,000 line because working capital alone supports it

C. The surety will deny the request because net worth is below \$1,000,000

D. The surety will approve the request but only for 50% of the amount until the contractor reduces their existing backlog

31. A contractor carries workers' compensation insurance and wants to understand how their claims experience affects their EMR over time. The contractor had two serious claims three years ago but has had zero claims for the past two consecutive years. The contractor expects their EMR to improve at the next renewal. What factors determine how quickly the EMR improves?

A. The EMR updates monthly based on a rolling 30-day claims window

B. The EMR resets to 1.0 automatically after two consecutive years with zero claims

C. The EMR improves gradually because it is based on a rolling three-year experience period with a one-year lag — the two serious claims will continue to affect the EMR until they age out of the experience period, and the two clean years will progressively offset the earlier claims as newer experience replaces older data in the calculation

D. The EMR cannot improve once it exceeds 1.0 because poor claims history creates a permanent surcharge

### **DOMAIN: OSHA RECORDKEEPING (3 Questions)**

32. A construction worker is operating a chop saw when a piece of cut metal flies up and strikes them in the face. The worker is wearing safety glasses, which prevent eye injury. However, the

metal piece cuts the worker's cheek, requiring three sutures at an urgent care clinic. The worker returns to work the next day with no restrictions. Is this case OSHA recordable?

A. No, because the safety glasses prevented the most serious potential injury (eye damage) and the cheek laceration is a minor wound

B. No, because the worker returned to full duty the next day with no lost time or restrictions

C. Yes, because butterfly bandages and wound closure strips are classified differently from sutures under OSHA's first aid definition

D. Yes, because sutures (stitches) constitute medical treatment beyond first aid — OSHA's definition of first aid includes wound closure with butterfly bandages and wound closure strips, but specifically excludes sutures, which are classified as medical treatment, making the case recordable regardless of the worker's return to full duty

33. An employer has 22 employees. During the year, the following incidents occur: (1) a worker receives 5 sutures for a hand laceration and returns to work; (2) a worker sprains their wrist and is prescribed a rigid wrist splint by a physician; (3) a worker gets a wood splinter removed with sterilized tweezers; (4) a worker develops physician-diagnosed work-related contact dermatitis and is prescribed a medicated cream; (5) a worker bruises their shin and applies an ice pack at the first aid station. How many cases are OSHA recordable?

A. One — only the sutures case is recordable because it involves the most invasive treatment

B. Three — the sutures (medical treatment beyond first aid), the rigid wrist splint (rigid immobilization is medical treatment beyond first aid), and the contact dermatitis with prescribed medicated cream (significant diagnosis plus prescription medication) are all recordable — the splinter removal with tweezers and the ice pack application are both first aid

C. Two — only the sutures and the wrist splint cases are recordable because prescription creams are classified as first aid

D. All five are recordable because any workplace injury requiring attention at a first aid station must be documented

34. A construction company experiences a workplace fatality when a steel beam falls from a crane and strikes a worker. The incident occurs at 11:00 AM on a Monday. The site superintendent calls 911 immediately and the worker is pronounced dead at the hospital at 12:30 PM. The company owner is notified at 1:00 PM. By what time must the employer report the fatality to OSHA?

- A. By 9:00 PM Monday — within 8 hours of the employer learning of the fatality (1:00 PM + 8 hours), using OSHA's 24-hour hotline, the nearest OSHA area office, or the online reporting portal
- B. By 11:00 AM Tuesday — within 24 hours of the incident occurring
- C. By 1:00 PM Tuesday — within 24 hours of the employer learning of the death
- D. By 8:00 AM Tuesday — when the nearest OSHA area office opens for normal business hours

**DOMAIN: PERSONNEL REGULATIONS (8 Questions)**

35. A contractor with 60 employees operates in Arkansas. A journeyman electrician who has worked for the company for 7 years is diagnosed with Type 1 diabetes that requires insulin injections and blood sugar monitoring several times daily. The electrician requests permission to take brief breaks (5-10 minutes each) three to four times per day for testing and injections. Under the ADA, what is the employer's obligation?

- A. The employer has no obligation because diabetes does not qualify as a disability under the ADA
- B. The employer must terminate the electrician because insulin injections on a construction jobsite create a safety hazard for other workers
- C. The employer must engage in an interactive process to determine whether the requested breaks constitute a reasonable accommodation — brief testing and injection breaks are a commonly recognized reasonable accommodation for diabetes, and unless the employer can demonstrate undue hardship, the accommodation should be provided
- D. The employer must grant the breaks but can deduct the break time from the electrician's pay at double the regular rate

36. A non-exempt pipe fitter earns \$36.00 per hour and works 50 hours during a workweek. The employer also pays the pipe fitter a \$200 non-discretionary weekly tool maintenance allowance. Under the FLSA, what is the correct overtime premium calculation?

- A. The overtime premium is calculated at half the base rate only (\$18.00) for 10 hours, totaling \$180.00 in overtime premium
- B. The \$200 tool allowance is excluded from the regular rate because it is a reimbursement for maintaining personal tools
- C. The overtime premium applies only to the first 5 overtime hours because the tool allowance covers the premium on the remaining 5 hours

D. The \$200 tool allowance must be included in the regular rate: regular rate =  $(\$36.00 \times 50 + \$200) \div 50 = \$40.00$ ; overtime premium =  $\$40.00 \times 0.5 = \$20.00$  per overtime hour  $\times 10$  hours =  $\$200.00$  in additional overtime premium beyond straight-time earnings

37. An employer with 35 employees has a written progressive discipline policy. A worker is caught stealing copper wire from the jobsite — a first offense. The progressive discipline policy states: "First offense: verbal warning." However, the employee handbook also states: "Theft of company property or project materials is grounds for immediate termination." The employer terminates the worker. The worker argues the employer violated the progressive discipline sequence. What is the likely outcome?

A. The worker will prevail because the progressive discipline policy creates a contractual sequence that must be followed for all offenses

B. The employer will likely prevail because the handbook's specific theft provision supersedes the general progressive discipline sequence — theft is a category of serious misconduct that justifies immediate termination, and most progressive discipline policies include carve-outs for offenses that pose immediate harm to the business or constitute criminal conduct

C. The outcome depends on whether the stolen copper wire was valued above or below \$500, which determines whether the offense is a misdemeanor or felony

D. The worker will prevail because construction materials left on jobsites are considered abandoned property that workers may take

38. A contractor operating on a Davis-Bacon covered project has plumbers who work 46 hours during the workweek. The prevailing wage determination specifies plumber wages of \$40.00/hour plus \$18.00/hour in fringe benefits. How must the 6 overtime hours be compensated?

A. 40 straight-time hours at \$40.00 wage plus \$18.00 fringe, and 6 overtime hours at \$60.00 wage ( $1.5 \times \$40.00$ ) plus \$18.00 fringe at the straight-time rate — the overtime premium applies only to the cash wage, not to the fringe benefit, which continues at the straight-time rate for all 46 hours

B. All 46 hours at the overtime rate of \$60.00 wage plus \$27.00 fringe ( $1.5 \times \$18.00$ ) because Davis-Bacon requires overtime on both components

C. 40 hours at the combined rate of \$58.00 and 6 hours at 1.5 times the combined rate (\$87.00)

D. No overtime is required because Davis-Bacon projects are exempt from FLSA overtime provisions

39. An employer discovers that their I-9 compliance audit reveals the following issues: (1) 12 I-9 forms are missing entirely for current employees; (2) 8 forms were completed but Section

2 (employer verification) was left blank; (3) 5 forms list expired documents that were not re-verified. What is the employer's total exposure for these I-9 deficiencies?

- A. No exposure because I-9 forms are advisory documents that do not carry penalties for non-compliance
- B. The employer faces penalties only for the 12 missing forms because incomplete forms and expired documents are classified as minor administrative issues
- C. The employer faces potential penalties for all 25 deficient I-9 forms — missing forms, incomplete forms, and failure to re-verify expired documents for non-citizens are all I-9 violations subject to civil penalties ranging from several hundred to several thousand dollars per form, depending on whether it is a first offense or a repeat violation
- D. The employer's exposure is limited to a warning letter for the first 10 violations and penalties only for violations exceeding 10

40. An employer with 50 employees has an employee who has been on FMLA leave for 11 weeks. The employee's physician clears them to return to work with the restriction: "No lifting more than 20 pounds for 4 weeks." The employee's regular job requires lifting up to 75 pounds. The employer has a light-duty position available in the office that accommodates the restriction. Under the FMLA and ADA, what are the employer's options?

- A. The employer must hold the employee's original position open until the lifting restriction is removed, because the FMLA guarantees job restoration
- B. The employer can terminate the employee because they cannot perform the essential functions of their original position
- C. The employer can offer the employee the remaining 1 week of FMLA leave (12 weeks total minus 11 used), and if the restriction continues beyond the 12th week, evaluate whether the 20-pound lifting restriction qualifies for ADA reasonable accommodation — which might include temporary assignment to the available light-duty position until the restriction is lifted
- D. The employer must offer the light-duty position permanently and cannot require the employee to return to their original job once they begin the office assignment

41. A contractor's workers' compensation carrier conducts a premium audit and discovers that 4 workers classified as "clerical office employees" (\$1.80 per \$100 of payroll) actually spend 60% of their time performing field inspections at construction sites. The appropriate classification for their actual duties is "construction project management" (\$6.50 per \$100 of payroll). Their combined annual payroll is \$280,000. What is the approximate additional premium owed?

- A. \$7,840, calculated at the clerical rate on the full payroll without adjustment for the misclassification
- B. \$13,160, calculated as the difference between the project management premium ( $\$280,000 \div \$100 \times \$6.50 = \$18,200$ ) and the clerical premium already paid ( $\$280,000 \div \$100 \times \$1.80 = \$5,040$ ), yielding \$13,160 in additional premium owed
- C. \$18,200, calculated at the full project management rate without crediting the clerical premium already paid
- D. \$0, because workers who split time between office and field duties are always classified at the lower office rate

42. An employer has a policy requiring all employees to submit to random drug testing. An employee tests positive for marijuana. The employee states they used marijuana legally in a state where recreational use is permitted during a vacation the previous weekend. The employer terminates the employee under their drug-free workplace policy. The employee sues for wrongful termination. In Arkansas, what is the likely outcome?

- A. The employee will prevail because marijuana use during off-duty hours in a state where it is legal cannot be the basis for termination
- B. The employee will prevail because drug tests cannot distinguish between recent use and use that occurred several days ago
- C. The employer will likely prevail because Arkansas employers in the construction industry can enforce drug-free workplace policies regardless of marijuana legalization in other states — the policy was established, communicated, and consistently applied, and construction is a safety-sensitive industry where impairment creates immediate physical danger
- D. The outcome depends on whether the employee was impaired at work, which can be determined by the concentration level in the drug test results

43. A contractor discovers that their HR manager has been asking female job applicants about their childcare arrangements and marital status during interviews, while not asking male applicants the same questions. Three female applicants who were asked these questions were not hired despite being qualified. What federal law has been violated?

- A. Title VII of the Civil Rights Act, which prohibits sex-based discrimination in hiring — asking questions about childcare and marital status only to female applicants constitutes disparate treatment based on sex, creating an inference that hiring decisions were influenced by gender-based assumptions about women's availability and commitment to work
- B. The FMLA, which prohibits questions about family status during any job interview
- C. The ADEA, which prohibits age-related inquiries during the hiring process

D. The Equal Pay Act, which prohibits inquiring about family status because it may lead to pay discrimination

44. A contractor operating on a federally funded highway project subject to the Davis-Bacon Act has workers performing duties in a classification not listed in the prevailing wage determination. The contractor has 3 workers performing specialized bridge deck coating application, but no "bridge deck coater" classification exists in the wage determination. What must the contractor do?

A. Pay the workers at the federal minimum wage because no prevailing wage rate exists for their specific classification

B. Pay the workers at the lowest prevailing wage rate listed in the determination because an unlisted classification defaults to the minimum rate

C. Classify the workers as laborers and pay the laborer prevailing wage rate because all unlisted classifications default to the laborer rate

D. Request a conformance action from the Department of Labor to establish a prevailing wage rate for the bridge deck coater classification — when workers perform duties in a classification not listed in the prevailing wage determination, the contractor must request the contracting agency to petition the DOL for a conformance rate before work begins

45. An employer has 55 employees and a comprehensive employee handbook. A supervisor tells a newly hired laborer: "Don't worry about the handbook — around here we're like family. As long as you do good work, you'll always have a job." Six months later, the laborer is terminated during a layoff. The laborer sues for wrongful termination based on the supervisor's promise. What is the employer's best defense?

A. The supervisor had no authority to modify employment terms, and the court should disregard the statement as an unauthorized individual opinion

B. The employer's best defense is the written at-will disclaimer in the employee handbook — if the handbook contains a clear, conspicuous at-will employment statement that the employee acknowledged receiving, courts generally uphold the written disclaimer over a supervisor's informal oral statement, though the employer should also train supervisors to avoid making promises that could be construed as employment guarantees

C. The employer has no defense because the supervisor's statement created a binding oral contract

D. The employer's defense depends solely on whether the laborer received a copy of the handbook within 24 hours of the supervisor's statement

**DOMAIN: FINANCIAL MANAGEMENT (5 Questions)**

46. A contractor's WIP report shows Project Delta: revised contract \$2,000,000; estimated total cost \$1,700,000; costs to date \$1,190,000; billings to date \$1,260,000. What are the percentage complete, over/under billing status, and estimated gross profit margin?

- A. 60% complete, over-billed by \$60,000, gross margin 10%
- B. 70% complete, over-billed by \$70,000, gross margin 20%
- C. 70% complete ( $\$1,190,000 \div \$1,700,000$ ), under-billed by \$140,000 (earned revenue of \$1,400,000 minus billings of \$1,260,000), with a 15% estimated gross profit margin ( $\$300,000 \div \$2,000,000$ )
- D. 75% complete, billings match earned revenue, gross margin 15%

47. A contractor uses the percentage-of-completion method on a \$5,000,000 project with estimated total costs of \$4,250,000. At the end of Year 1, costs incurred total \$2,125,000. During Year 2, the project manager discovers material prices have escalated and revises the estimated total cost to \$4,600,000. What is the cumulative gross profit that should be recognized through Year 1 under the revised estimate?

- A. \$184,783, calculated as: revised profit =  $\$5,000,000 - \$4,600,000 = \$400,000$ ; revised % complete =  $\$2,125,000 \div \$4,600,000 = 46.2\%$ ; cumulative profit =  $46.2\% \times \$400,000 = \$184,783$  — compared to the \$375,000 originally recognized ( $50\% \times \$750,000$ ), requiring a downward adjustment of approximately \$190,217 in Year 2
- B. \$375,000, unchanged from the original estimate because Year 1 recognition cannot be revised retroactively
- C. \$750,000, equal to the full original estimated profit
- D. \$0, because cost revisions eliminate all profit recognition

48. A contractor's cash flow analysis shows the following 90-day projection: beginning cash \$80,000; collections \$640,000; retainage releases \$50,000; credit line draws \$120,000. Outflows: payroll \$440,000; materials/subcontractors \$360,000; overhead \$75,000; equipment payments \$35,000; tax payments \$25,000. What is the projected ending cash position?

- A. Positive \$155,000, calculated by excluding the tax and equipment payments from total outflows
- B. Positive \$80,000, unchanged because inflows and outflows are balanced
- C. Negative \$80,000, calculated by excluding the credit line draw from available funds

D. Negative \$45,000, calculated as total available funds (\$890,000) minus total outflows (\$935,000) — the contractor faces a \$45,000 cash shortfall and must arrange additional financing, accelerate collections, or reduce expenditures

49. A contractor reviews their accounts receivable aging and discovers that \$95,000 in receivables from a single project owner are 120 days past due. The owner has not responded to three written payment demands. The contractor's CPA recommends establishing a bad debt reserve for this amount. What percentage reserve should the CPA likely recommend for receivables at this aging?

A. 5%, representing the standard reserve for receivables under 60 days old

B. 40% to 50% or higher — receivables over 120 days have a significantly elevated risk of becoming uncollectible, and a reserve of 40-50% acknowledges the high probability that some or all of this amount may never be collected, with the contractor simultaneously pursuing all available collection remedies including mechanics' liens, bond claims, and legal action

C. 10%, representing the standard reserve for all receivables regardless of aging

D. 0%, because no reserve is needed while collection efforts are still underway

50. A contractor's income statement for the fiscal year shows: total contract revenue \$7,200,000; cost of construction \$6,120,000; G&A expenses \$648,000. A potential banking partner asks the contractor to explain their profitability metrics. What are the gross margin, G&A ratio, and net margin?

A. Gross margin 15% ( $\$1,080,000 \div \$7,200,000$ ), G&A ratio 9% ( $\$648,000 \div \$7,200,000$ ), net margin 6% ( $\$432,000 \div \$7,200,000$ ) — the 15% gross margin indicates healthy project profitability, the 9% G&A ratio shows overhead is manageable, and the 6% net margin reflects strong bottom-line performance

B. Gross margin 20%, G&A ratio 12%, net margin 8%

C. Gross margin 10%, G&A ratio 5%, net margin 5%

D. Gross margin 15%, G&A ratio 15%, net margin 0%

## Practice Exam 20: Answer Key and Explanations

**1. D** — An S-Corporation pays no entity-level federal income tax. The \$500,000 passes through to each shareholder's individual return via Schedule K-1 based on ownership percentage — Shareholder A reports \$300,000 and Shareholder B reports \$200,000. This eliminates the double taxation that occurs with C-Corporations, where profits are taxed at the corporate level (21%) and again as dividends at the individual level.

**2. B** — Adding a classification to an existing commercial license is an administrative process through the ACLB. The contractor applies to add the ME classification, which may require demonstrating relevant mechanical construction experience, passing any classification-specific exam requirements, and paying the applicable fee. A completely new license application with separate financials and references is not required.

**3. A** — A competent residential builder should review the property survey and identify easement boundaries before beginning foundation work. Failing to check the survey before excavation is a professional oversight that could have been avoided with basic pre-construction due diligence. The resulting encroachment into the utility easement may require costly foundation modifications at the contractor's expense.

**4. C** — The November 30 financial statement is approximately 4 months old at the April 1 renewal date, well within the ACLB's 12-month currency requirement. The statement reflects the contractor's fiscal year-end position and provides current financial information. No additional CPA letter or supplemental documentation is required beyond the standard financial statement.

**5. D** — The building department and the ACLB operate independently with separate jurisdictions. The building department enforces building codes through its own process — requiring corrections, issuing stop-work orders, and revoking permits. The ACLB separately evaluates whether the code violations constitute grounds for licensing disciplinary action. Both processes can proceed simultaneously without one depending on the other.

**6. B** — The contractor must make a strategic business decision: bid at the calculated price (\$1,380,000) or sharpen the bid to compete near the \$2,650,000 market expectation. The calculated price produces a 5% margin, while adjusting toward the market price might increase or decrease that margin. This is a fundamental judgment balancing profitability against win probability.

**7. C** — When specifications contain contradictory requirements, the contractor should submit an RFI before the bid deadline requesting clarification. If no response is received in time, pricing the more stringent R-30 requirement protects against underpricing. This approach documents the contractor's diligence and avoids the risk of bidding the lower specification only to be held to the higher one.

**8. A** — Primer:  $28,000 \div 350 = 80$  gallons  $\times$  \$28.00 = \$2,240. Finish paint:  $28,000 \div 300 = 93.33$  gallons  $\times$  2 coats = 186.67 gallons  $\times$  \$42.00 = \$7,840. Labor:  $28,000 \div 200 = 140$  hours  $\times$  \$44.00 = \$6,160. Total: \$2,240 + \$7,840 + \$6,160 = \$16,240. The production rate of 200 SF/hour covers all three coats combined, so labor is calculated once on the total area.

**9. D** — The voluntary alternate should be presented as a separate line item below the base bid, clearly labeled as a proposed cost savings. This allows the owner to evaluate the substitute on its merits while keeping the base bid clean and comparable to other bidders. The owner can accept or reject the alternate independently of the award decision.

**10. B** — When two of three documents agree on a quantity (floor plan and hardware schedule both show 42 doors) and the third shows a lower number (door schedule shows 38), the estimator should price the higher quantity to avoid underpricing. The estimator should also

submit an RFI documenting the discrepancy. Underpricing by 4 doors could create a significant cost exposure if the architect confirms 42.

**11. C** — The contractor's daily cost documentation — verified by the owner's representative — provides contemporaneous, third-party-verified evidence of actual costs. When a change order price is not agreed upon in advance and work proceeds on a force account or T&M basis, verified daily cost records are the standard evidence for determining the fair price. This documentation gives the contractor a strong negotiating position.

**12. A** — The contractor priced the bid based on the codes in effect on the bid date. A code change enacted after contract execution constitutes a change to the contractor's scope not included in the original pricing. The Spearin Doctrine's implied warranty of design adequacy applies to the code edition in effect when the contract was signed. The \$92,000 additional cost should be addressed through a change order.

**13. D** — The general contractor has a duty to verify subcontractor progress before including it in applications to the owner. Passing through \$140,000 in inflated billing without verification may constitute breach of the prime contract's payment provisions. The GC faces repayment demands, potential withholding of future payments, and if the pattern is found to be knowing or negligent, possible fraud allegations.

**14. B** — The existing slab thickness shown on the original building plans constitutes a contract document representation. The actual condition (4 inches thinner) differs materially from what was represented. This is a classic Type I differing site condition — the contractor relied on the document representation and is entitled to additional compensation for the unforeseen structural reinforcement required.

**15. C** — The subcontractor should send a formal written notice documenting the disputed \$15,000, identifying the specific work items considered complete, and requesting a joint inspection to resolve the disagreement. The subcontractor should continue performing remaining contract work to avoid a breach claim. Written documentation preserves all legal remedies while the direct communication channel offers the best opportunity for resolution.

**16. A** — A wrongful termination for cause is typically converted to a termination for convenience. The contractor receives payment for completed work, termination costs (demobilization, subcontractor charges), and reasonable profit on work performed. The contractor does not receive anticipated profit on the unperformed portion — that is the key financial distinction between convenience termination and breach of contract damages.

**17. D** — The architect failed to issue a decision within the contractual 30-day timeframe (45 days have passed). Depending on the specific contract language, the architect's failure may be treated as a denial of the claim or may entitle the contractor to proceed to the next dispute resolution step (typically mediation). The contract's dispute resolution provision should specify the consequence of the architect's failure to act timely.

**18. B** — The contractor should coordinate with the school administration to schedule the shutdown during a break, weekend, or non-instructional day. If no such window exists, temporary power through a generator should maintain essential services in occupied areas during the shutdown. The contract requires continuous building operations, and the contractor must plan around this requirement.

**19. A** — A \$280,000 elevator addition is a major scope change requiring formal documentation before work begins. The contractor should respond in writing, submit a detailed change order proposal with cost and schedule analysis, and request written authorization. The phrase "formal change order to follow" acknowledges the need for documentation but does not constitute authorization to proceed at an undefined price.

**20. C** — The contract requires owner approval for off-site storage locations. The contractor did not obtain formal approval of the fabricator's yard before requesting payment for stored materials. The owner can legitimately reject the \$45,000 stored materials claim until the storage location is formally approved. The contractor should have obtained this approval proactively.

**21. D** — A punch list of 220 items containing incomplete work — not minor corrections — indicates the project is not substantially complete. Substantial completion means the work is sufficiently complete for the owner to occupy and use the building for its intended purpose. Extensive incomplete work contradicts this standard. The contractor should continue active construction before requesting another substantial completion inspection.

**22. B** — The project manager must notify the architect of the unauthorized substitution immediately. Galvanized duct does not meet the aluminum specification, and the subcontractor installed it without approval. The architect will determine whether the substitution is acceptable. If rejected, the HVAC subcontractor bears the full cost of removing the concealed galvanized duct and replacing it with specified aluminum.

**23. A** — Chain B at 22 days is the controlling path to the milestone. Chain A with the 5-day delay now takes 20 days (15 + 5), which is still shorter than Chain B's 22 days. Chain B continues to govern the milestone date. The delay consumed Chain A's float but did not push it past Chain B. The milestone date is unchanged.

**24. C** — The specification limits wind speed during placement to 15 mph for exterior concrete. Sustained winds of 25-35 mph far exceed this limit. Placing concrete in these conditions causes accelerated surface evaporation and plastic shrinkage cracking that cannot be adequately mitigated with evaporation retarders alone. Postponing the pour to compliant conditions is the only specification-conforming option.

**25. D** —  $CPI = \$5,200,000 \div \$5,600,000 = 0.929$  (over budget — getting \$0.93 per dollar spent).  $SPI = \$5,200,000 \div \$5,500,000 = 0.945$  (behind schedule — 94.5% of planned work completed).  $EAC = \$8,000,000 \div 0.929 = \$8,612,000$ . Both indices below 1.0 indicate the project is over budget and behind schedule, requiring corrective action on both fronts.

**26. A** — The contract requires 48-hour advance notice before utility shutdowns. The contractor must notify the building manager immediately and schedule the shutdown for Wednesday at the earliest. Violating the notice requirement could constitute a contract breach and disrupt building occupants who need time to prepare for the water interruption. The 2-day delay is the cost of contractual compliance.

**27. C** — Responding professionally and arranging the requested independent evaluation demonstrates transparency and confidence in the quality of the work. An independent evaluation that confirms specification compliance protects the contractor more effectively than a defensive refusal. If the evaluation identifies legitimate concerns, the contractor can address them proactively.

**28. D** — Fire-rated wall assemblies are tested and certified as complete systems by UL or other testing laboratories. Every component — including screw type, spacing, length, drywall thickness, and joint treatment — must match the tested configuration exactly. Substituting standard screws for the specified fine-thread screws voids the fire rating certification, meaning the assembly no longer meets the required fire resistance.

**29. B** — The products-completed operations coverage responds to the \$180,000 property damage claims from the defective waterproofing. However, the \$400,000 lost revenue claim is consequential economic loss that may not be covered by the CGL policy. CGL typically covers bodily injury and direct property damage to third parties, and pure economic losses like lost hotel revenue have complex coverage implications.

**30. A** — Working capital capacity:  $15 \times \$310,000 = \$4,650,000$ , which numerically supports the \$4,000,000 request. However, the surety evaluates the complete financial picture — existing backlog of \$4,200,000 is already near the capacity limit, and adding \$4,000,000 would nearly double the bonded exposure. Net worth of \$820,000 and revenue of \$6,500,000 must also support the increased risk.

**31. C** — The EMR is based on a rolling three-year experience period with a one-year lag. The two serious claims from three years ago remain in the calculation until they age out of the experience period. The two consecutive clean years will progressively offset the earlier claims as newer, claim-free experience replaces older data. The EMR improves gradually, not immediately.

**32. D** — Sutures constitute medical treatment beyond first aid under OSHA's definitions. OSHA's first aid list includes butterfly bandages and wound closure strips but specifically excludes sutures. Any laceration requiring stitches crosses the first aid threshold and is recordable regardless of whether the worker missed time or had restrictions. The case is recorded with the original injury date.

**33. B** — Three cases are recordable: sutures (medical treatment beyond first aid), rigid wrist splint (rigid immobilization prescribed by a physician is medical treatment beyond first aid), and contact dermatitis with prescribed medicated cream (physician-diagnosed work-related illness plus prescription medication). Splinter removal with tweezers and ice pack application are both classified as first aid.

**34. A** — Fatalities must be reported to OSHA within 8 hours of the employer learning of the death. The company owner learned at 1:00 PM, making the deadline 9:00 PM the same day. Reports can be made via OSHA's 24-hour hotline (1-800-321-OSHA), the nearest OSHA area office, or the online portal. The 8-hour clock runs from employer knowledge, not from the time of the incident.

**35. C** — Type 1 diabetes is a recognized disability under the ADA. The employer must engage in an interactive process to determine whether brief testing and injection breaks constitute a reasonable accommodation. Breaks of 5-10 minutes for blood sugar monitoring and insulin injections are a commonly recognized accommodation that typically does not create undue hardship for construction employers.

**36. D** — Non-discretionary tool allowances must be included in the regular rate. Regular rate:  $(\$36.00 \times 50 + \$200) \div 50 = \$40.00/\text{hour}$ . Overtime premium:  $\$40.00 \times 0.5 = \$20.00$  per

overtime hour  $\times$  10 hours = \$200.00 in additional premium. Total pay: straight-time ( $\$36.00 \times 50 = \$1,800$ ) + allowance (\$200) + overtime premium (\$200) = \$2,200.

**37. B** — The handbook's specific theft provision supersedes the general progressive discipline sequence. Theft of company property or project materials is a category of serious misconduct that justifies immediate termination. Progressive discipline policies typically include carve-outs for offenses involving criminal conduct, safety violations, or serious breaches of trust — theft falls squarely within these exceptions.

**38. A** — Under Davis-Bacon, the overtime premium applies only to the cash wage rate. Straight time: 40 hours  $\times$  ( $\$40.00$  wage +  $\$18.00$  fringe) = \$2,320. Overtime: 6 hours  $\times$  ( $\$60.00$  overtime wage +  $\$18.00$  fringe at straight-time rate) = \$468. The fringe benefit continues at the straight-time rate for all hours and is not multiplied by the 1.5 overtime factor.

**39. C** — All 25 deficient I-9 forms create penalty exposure. Missing forms (12), incomplete forms (8), and failure to re-verify expired documents (5) are all separate violations subject to civil penalties. Penalties range from several hundred to several thousand dollars per form depending on whether it is a first offense or repeat violation. Systematic I-9 deficiencies indicate a compliance program failure requiring immediate correction.

**40. C** — The employer can offer the remaining 1 week of FMLA leave (12 total minus 11 used). If the lifting restriction continues beyond the 12th week, the analysis shifts to the ADA — the employer should evaluate whether the 20-pound restriction qualifies for reasonable accommodation, which might include temporary assignment to the available light-duty position. The two laws provide overlapping but distinct protections.

**41. B** — Project management premium:  $(\$280,000 \div \$100) \times \$6.50 = \$18,200$ . Clerical premium already paid:  $(\$280,000 \div \$100) \times \$1.80 = \$5,040$ . Additional premium:  $\$18,200 - \$5,040 = \$13,160$ . Workers' compensation classifications are based on actual job duties, not job titles. Field inspectors performing construction oversight belong in the project management classification.

**42. C** — Arkansas employers in construction can enforce drug-free workplace policies regardless of marijuana legalization in other states. The policy was established, communicated, and consistently applied. Construction is a safety-sensitive industry where impairment creates immediate physical danger. The employee's off-duty legal use in another state does not override the employer's legitimate safety-based zero-tolerance policy.

**43. A** — Asking childcare and marital status questions only to female applicants constitutes disparate treatment based on sex under Title VII. These questions create an inference that hiring decisions were influenced by gender-based assumptions about women's availability and workplace commitment. The selective application to female candidates — while male candidates were not asked — is direct evidence of sex discrimination in the hiring process.

**44. D** — When workers perform duties in a classification not listed in the prevailing wage determination, the contractor must request a conformance action from the DOL through the contracting agency. The DOL will establish an appropriate wage rate for the unlisted classification. The contractor cannot unilaterally assign a rate or default to the laborer classification for specialized work.

**45. B** — The employer's best defense is a clear, conspicuous written at-will disclaimer in the handbook that the employee acknowledged receiving. Courts generally uphold written at-will provisions over supervisors' informal oral statements. However, the employer should also train supervisors to avoid making promises that could be construed as employment guarantees, because repeated oral assurances can weaken the at-will defense in some jurisdictions.

**46. C** — Percentage complete:  $\$1,190,000 \div \$1,700,000 = 70\%$ . Earned revenue:  $70\% \times \$2,000,000 = \$1,400,000$ . Billings:  $\$1,260,000$ . Under-billed by  $\$140,000$  ( $\$1,400,000 - \$1,260,000$ ). Gross profit:  $\$2,000,000 - \$1,700,000 = \$300,000$ . Gross margin:  $\$300,000 \div \$2,000,000 = 15\%$ . The under-billing means the contractor has performed  $\$140,000$  more work than invoiced.

**47. A** — Revised total cost:  $\$4,600,000$ . Revised profit:  $\$5,000,000 - \$4,600,000 = \$400,000$ . Revised % complete:  $\$2,125,000 \div \$4,600,000 = 46.2\%$ . Cumulative profit:  $46.2\% \times \$400,000 = \$184,783$ . Originally recognized:  $50\% \times \$750,000 = \$375,000$ . Downward adjustment of approximately  $\$190,217$  needed in Year 2 to correct the overstatement caused by the cost increase.

**48. D** — Total available funds:  $\$80,000 + \$640,000 + \$50,000 + \$120,000 = \$890,000$ . Total outflows:  $\$440,000 + \$360,000 + \$75,000 + \$35,000 + \$25,000 = \$935,000$ . Projected ending:  $\$890,000 - \$935,000 = -\$45,000$ . The contractor faces a  $\$45,000$  shortfall requiring additional financing, accelerated collections, or deferred expenditures.

**49. B** — Receivables over 120 days old that are unresponsive to multiple payment demands carry a very high probability of becoming uncollectible. A 40-50% reserve acknowledges this elevated risk while the contractor simultaneously pursues all available collection remedies — demand letters, mechanics' liens (if applicable), bond claims, and potentially litigation. Waiting without reserving creates unrealistic financial reporting.

**50. A** — Gross profit:  $\$7,200,000 - \$6,120,000 = \$1,080,000$ . Gross margin:  $\$1,080,000 \div \$7,200,000 = 15.0\%$ . G&A ratio:  $\$648,000 \div \$7,200,000 = 9.0\%$ . Net income:  $\$1,080,000 - \$648,000 = \$432,000$ . Net margin:  $\$432,000 \div \$7,200,000 = 6.0\%$ . All three metrics indicate healthy financial performance suitable for banking and bonding relationships.