PRACTICE EXAM 18: MISSISSIPPI LAW AND BUSINESS MANAGEMENT SIMULATION (50 QUESTIONS)

Time Allowed: 2 Hours | 50 Questions | **Passing Score:** 70% (35 Correct)

This is an openbook examination. You may use the NASCLA Contractors Guide to Business, Law and Project Management, Mississippi 6th Edition and a silent, nonprinting, nonprogrammable calculator.

1. A contractor's project has a fixedprice contract for $2,300,000 with a contractual completion date of November 15. The contract includes a liquidated damages clause of $2,800 per calendar day. The project is completed on December 9 — 24 days late. However, the contractor has documented and submitted time extension requests for 16 days of ownercaused delays (late design decisions, access restrictions, and ownerfurnished equipment delays). If the 16day extension is approved, what is the contractor's liquidated damages liability?

A. $67,200 for the full 24 days because liquidated damages apply to all delays once the contractual completion date passes

B. $22,400 for 8 contractorcaused delay days (24 total − 16 approved extension days = 8 days × $2,800/day) — liquidated damages apply only to delays attributable to the contractor, and the 16 documented ownercaused days are excluded through the approved time extension

C. $0 because any approved time extension automatically voids the entire liquidated damages clause for the project

D. $44,800 for 16 days because the extension is applied to the ownercaused days rather than reducing the total late period

2. A contractor operating as a Ccorporation earns $550,000 in taxable corporate income. After paying federal corporate tax at 21% and Mississippi corporate tax at 5% on income over

$10,000, the corporation distributes $180,000 in dividends. What is the approximate federal corporate tax on the $550,000?

A. $27,500, calculated at 5% federal corporate rate on the full $550,000

B. $550,000 is taxfree at the corporate level because construction companies receive a federal exemption from corporate income tax

C. $82,500, calculated at 15% because Ccorporations with income under $1,000,000 qualify for the reduced small business rate

D. $115,500 ($550,000 × 21%), and the $180,000 dividend distribution will be taxed again on shareholders' personal returns at the applicable qualified dividend rate — creating the double taxation characteristic of Ccorporations

3. A contractor's project involves a 19footdeep basement excavation in an urban area. The competent person classifies the upper 10 feet as Type B and the lower 9 feet as Type C based on visual and manual soil testing. The contractor plans to use a trench shield for the lower portion and sloping for the upper portion. What are the correct slope angles for each section?

A. The upper Type B section requires a 1:1 slope (45 degrees — 10 feet of horizontal setback per side) and the lower Type C section is protected by the trench shield — the combination system uses the correct slope for each soil classification, with the shield protecting the more unstable lower zone

B. Both sections require a 1½:1 slope (34 degrees) because the overall excavation must use the slope angle of the least stable soil classification throughout

C. The upper section requires a ¾:1 slope (53 degrees) and the lower section requires a 1:1 slope (45 degrees), with no shielding needed

D. The entire excavation requires vertical walls with shoring because urban excavations adjacent to buildings cannot use sloping regardless of soil classification

4. A contractor's employee works on a DavisBacon covered project. The employee is classified as an electrician with a prevailing wage of $44.00 basic rate plus $19.50 fringe. The employee works 50 hours in one week. The contractor pays $44.00 per hour for all 50 hours and provides $15.00 per hour in health insurance benefits for all hours. What violations, if any, exist?

A. No violations because the basic rate is correct and the health insurance exceeds the fringe requirement

B. No violations because the total compensation ($44.00 + $15.00 = $59.00) exceeds the combined basic plus fringe rate ($44.00 + $19.50 = $63.50), $59.00 is less than $63.50, so there IS a violation

C. Two violations exist — the fringe benefit package is $4.50 per hour short ($19.50 required − $15.00 provided), and overtime must be calculated at 1.5 times the basic rate ($66.00/hr) for the 10 hours over 40, not at the straighttime rate of $44.00

D. Only a fringe violation for the $4.50 per hour shortfall, because overtime on DavisBacon projects is optional when the total weekly compensation exceeds $3,000

5. A contractor's project manager discovers that the company's overhead rate was calculated using projected annual overhead of $310,000, but midyear actual overhead has already reached $195,000 with six months remaining. If the current spending rate continues, actual annual overhead will be approximately $390,000. The projected annual direct cost volume is $2,000,000. What is the impact on the overhead rate?

A. No impact because overhead rates are fixed at the beginning of the fiscal year and cannot be adjusted regardless of actual spending trends

B. The actual overhead rate will be approximately 19.5% ($390,000 ÷ $2,000,000) versus the projected 15.5% ($310,000 ÷ $2,000,000) — the 4% difference means every project bid at 15.5% underrecovers overhead by 4% of direct costs, producing total unrecovered overhead of approximately $80,000 for the year

C. The overhead rate decreases because higher overhead costs reduce the company's profit, which in turn reduces the overhead percentage

D. The impact is limited to 1% because GAAP limits midyear overhead rate adjustments to a maximum of 1% from the projected rate

6. A contractor's project involves a renovation of a 1955 commercial building. During demolition, workers discover pipe insulation that appears friable and may contain asbestos. Several pieces of insulation have already been broken and disturbed during ductwork removal. What is the contractor's immediate obligation?

A. Stop all work in the affected area immediately, evacuate workers, secure the area to prevent further disturbance, and arrange for qualified asbestos testing — friable insulation in a 1955 building has a very high probability of containing asbestos, and the workers have already been exposed to potential fiber release through the disturbance

B. Continue work wearing N95 dust masks because pipe insulation from the 1950s typically contains only trace amounts of asbestos below regulated levels

C. Collect a sample and mail it to a laboratory while continuing demolition in adjacent areas because testing results will take several days

D. Spray the disturbed insulation with water and continue removal because wetting eliminates all fiber release hazards

7. A contractor's project has the following scenario: the owner issues a change directive ordering the contractor to proceed with additional work before the change order price is agreed upon. The contractor estimates the additional work will cost $125,000. The owner disputes the cost and offers $85,000. The contractor must proceed with the work while the price is being negotiated. What contract mechanism allows this?

A. A unilateral price reduction by the contractor, reducing the scope to match the owner's $85,000 budget without formal authorization

B. A field order, which limits additional work to $10,000 and cannot be used for changes exceeding that threshold

C. A construction change directive (CCD) — this mechanism allows the owner to direct the contractor to proceed with changed work before the cost is agreed upon, with the final price to be negotiated or determined through the contract's dispute resolution process

D. The mechanism is called a "construction change directive" or "change directive" — it authorizes the contractor to proceed with the work immediately while the parties continue negotiating the price, ensuring the project is not delayed by the pricing dispute; the contractor should document all costs carefully because the final change order amount will be based on actual costs if agreement is not reached

8. A contractor's financial statements show: total assets $1,280,000, total liabilities $890,000, current assets $620,000, current liabilities $480,000. The contractor is applying for a Mississippi commercial license. What are the net worth and current ratio?

A. Net worth is $1,280,000 and current ratio is 2.67 because net worth equals total assets and the current ratio includes noncurrent assets

B. Net worth is $480,000 and current ratio is 1.00 because net worth equals current liabilities and the current ratio is always 1.0 for license applicants

C. Net worth is $390,000 ($1,280,000 − $890,000) and current ratio is 1.29 ($620,000 ÷ $480,000) — the net worth of $390,000 exceeds the $50,000 minimum for major classifications, and the current ratio of 1.29 indicates the contractor has $1.29 in current assets for every $1.00 in current liabilities

D. Net worth is $140,000 and current ratio is 0.75 because net worth is calculated by subtracting current assets from total assets

9. A contractor's project involves installing a commercial elevator. The elevator pit is 14 feet deep with a single access point — a 30inch diameter opening at the top. Before any worker enters the pit, what must the contractor determine?

A. Whether the elevator pit meets the OSHA definition of a confined space — limited entry/exit (single 30inch opening), not designed for continuous occupancy, and potential for hazardous atmosphere; if it qualifies, the contractor must implement a full confined space entry program including atmospheric testing, ventilation, an attendant, rescue procedures, and a written entry permit

B. Only whether the pit has standing water, because water is the sole hazard that triggers confined space protocols in elevator pits

C. Only whether a ladder is available for entry and exit, because the presence of a ladder satisfies all OSHA confined space requirements

D. Only whether the pit exceeds 20 feet deep, because OSHA's confined space standard applies only to spaces deeper than 20 feet

10. A contractor's project involves constructing a retaining wall adjacent to a busy highway. The contractor's competent person must evaluate the soil adjacent to the excavation. The highway carries heavy truck traffic that generates significant ground vibration. How does this vibration affect the soil classification?

A. Highway vibration has no effect on soil classification because OSHA's classification system considers only the soil's inherent physical properties

B. The vibration from heavy traffic may require the competent person to classify the soil at a lower stability rating than the visual and manual tests alone would indicate — vibration is a recognized destabilizing factor that reduces soil cohesion and increases cavein risk, potentially requiring more conservative protective measures than the undisturbed soil characteristics would suggest

C. The vibration improves soil stability by compacting the soil particles more tightly, potentially allowing a higher classification than the tests indicate

D. Vibration only affects soil classification if the highway carries more than 10,000 vehicles per day, which is the OSHA threshold for vibrationaffected excavations

11. A contractor's project is governed by a contract that includes a mutual waiver of consequential damages. The contractor's defective waterproofing causes $350,000 in water damage to the owner's inventory stored in the building. The owner sues for the $350,000 in inventory damage plus $150,000 in lost business income during the repair period. What can the owner recover?

A. Both the $350,000 in inventory damage and the $150,000 in lost business income because water damage claims are exempt from consequential damage waivers

B. Only the $150,000 in lost business income because the inventory damage is classified as a direct damage that is waived under the mutual waiver

C. $500,000 total because mutual waivers only limit the contractor's consequential damages, not the owner's

D. The $350,000 in inventory damage may be recoverable as a direct damage (damage directly caused by the defective work), but the $150,000 in lost business income is a consequential damage that is barred by the mutual waiver — the owner's recovery depends on whether the inventory damage is classified as direct (recoverable) or consequential (barred) under the applicable jurisdiction's interpretation

12. A contractor's employee sustains a severe laceration requiring 15 stitches when a piece of sheet metal slips during installation. The injury is treated at an urgent care facility (outpatient — no hospital admission). The employee misses 3 days of work. Under OSHA recordkeeping requirements, how is this injury classified on the OSHA 300 Log?

A. The injury is recorded as a case with days away from work — the laceration requiring medical treatment beyond first aid (stitches) and resulting in 3 days away from work meets the criteria for OSHA 300 Log recording as a daysaway case

B. The injury is not recordable because it was treated at an urgent care facility rather than a hospital emergency department

C. The injury is recorded only if the employee files a formal written complaint requesting OSHA documentation

D. The injury is not recordable because lacerations treated with stitches are classified as first aid under OSHA's recordkeeping standard

13. A contractor's project involves a $3,100,000 commercial building. The contract requires the contractor to submit a CPM schedule within 30 days of the notice to proceed. The schedule must show all activities, logical relationships, the critical path, and float values. The contractor submits the schedule on Day 28 showing 847 activities. The owner's scheduler reviews it and identifies that 200 activities have no logical predecessors or successors — they are "dangling" activities disconnected from the schedule logic. Why is this a problem?

A. Dangling activities are acceptable because they represent milestone events that do not require logical connections

B. Dangling activities have no practical effect on the schedule because they are automatically excluded from the critical path calculation

C. Dangling activities undermine the integrity of the entire CPM schedule because disconnected activities cannot be properly sequenced, their float cannot be accurately calculated, and they distort the critical path analysis — a valid CPM schedule requires every activity (except the project start and finish milestones) to have at least one predecessor and one successor to create a complete logical network

D. Dangling activities are only a problem if they represent more than 50% of the total activities in the schedule

14. A contractor's project has the following WIP data: contract price $1,750,000, estimated total cost $1,487,500, actual costs $1,041,250, billings $1,150,000. Using percentageofcompletion, what is the completion percentage, earned revenue, and billing status?

A. Completion is 65.8% ($1,041,250 ÷ $1,750,000) and earned revenue equals billings at $1,150,000

B. Completion is 100% because costs have exceeded 60% of the contract price, triggering full revenue recognition

C. Completion is 70% and earned revenue is $1,750,000 because any project past 50% complete recognizes full contract revenue

D. Completion is 70% ($1,041,250 ÷ $1,487,500), earned revenue is $1,225,000 (70% × $1,750,000), and the project is underbilled by $75,000 because earned revenue of $1,225,000 exceeds billings of $1,150,000 — the $75,000 underbilling is a current asset

15. A contractor's project involves a commercial building where the architect specifies a proprietary roofing membrane by manufacturer and product name with "no substitutions

permitted." The contractor finds an alternative product from a different manufacturer that meets the same performance criteria at 20% lower cost. Can the contractor propose the alternative?

A. No — a proprietary specification with "no substitutions" language is binding; the contractor must use the named product regardless of the availability of less expensive alternatives, because the architect made a deliberate design decision to specify that particular product and the "no substitutions" clause eliminates the contractor's right to propose alternatives

B. Yes, because all "no substitutions" clauses are unenforceable under Mississippi procurement law

C. Yes, because the contractor has a duty to propose costsaving alternatives on every project regardless of specification language

D. Yes, but only if the alternative product is manufactured in the United States and the specified product is imported

16. A contractor's project involves work on a federally funded highway project. The contractor's payroll records show a laborer classified as "general laborer" performing work that includes operating a backhoe for 4 hours during a shift. The prevailing wage determination lists different rates for general laborers ($28.00 + $14.00 fringe) and equipment operators ($36.50 + $17.25 fringe). What DavisBacon compliance issue exists?

A. No issue because general laborers may operate any equipment as long as they are paid the laborer rate for all hours worked

B. The contractor must pay the equipment operator rate ($36.50 + $17.25) for the 4 hours the laborer operated the backhoe — DavisBacon requires workers to be paid the applicable prevailing wage for the classification of work actually performed, not the classification they are assigned by the contractor

C. The issue is resolved by averaging the two rates for the full shift because splitclassification days use the blended rate method

D. No issue because backhoes are classified as "laboreroperated equipment" that does not trigger the equipment operator rate

17. A contractor's project involves the renovation of a hospital that must remain fully operational during construction. The contractor must maintain negative air pressure containment barriers between construction zones and patient care areas to prevent dust migration. During a routine check, the safety director discovers that the containment barrier on

the 4th floor has a 6inch tear that is allowing unfiltered air to pass from the construction zone into the adjacent intensive care unit corridor. What must happen immediately?

A. Document the tear in the daily report and schedule repair for the following morning during the next maintenance cycle

B. Apply duct tape over the tear and continue construction activities because the temporary repair is sufficient until the barrier can be properly patched

C. Notify the building maintenance department and request that they increase the HVAC system airflow to compensate for the compromised barrier

D. Stop all dustgenerating construction activities in the 4th floor zone immediately, repair the containment barrier, verify negative air pressure is restored, and notify hospital infection control staff — a breached containment barrier in a hospital allows construction dust and potential pathogens to reach immunocompromised patients, creating a serious health risk that must be addressed before any construction resumes

18. A contractor's project has a contract price of $1,400,000 and estimated total cost of $1,190,000. The original estimated profit is $210,000 (15% margin). At the 80% completion point, actual costs are $1,008,000 versus a prorated budget of $952,000 (80% × $1,190,000). The revised cost to complete is $248,000. What is the projected profit and how does it compare to the original estimate?

A. Projected profit remains $210,000 because cost projections at 80% are preliminary and should not be used to revise profit estimates

B. Projected profit is $392,000 because the remaining budget of $182,000 is more than sufficient to complete the work

C. Projected profit is $144,000 — the revised total cost of $1,256,000 ($1,008,000 + $248,000) exceeds the original estimate of $1,190,000 by $66,000, reducing projected profit from $210,000 to $144,000; the 80% checkpoint shows $56,000 in overrun ($1,008,000 vs. $952,000 budget), confirming the cost trend

D. Projected profit is $0 because the cost overrun at 80% indicates the project will break even at best

19. A contractor's project involves a commercial building where the structural specifications require anchor bolts for steel column base plates to be installed within ±1/8 inch of the specified location. The contractor's survey team measures the installed anchor bolts and finds that three

bolt groups are off by 3/8 inch — outside the specified tolerance. The structural steel erection has not yet begun. What should the contractor do?

A. Proceed with steel erection because 3/8 inch is within standard construction tolerances for anchor bolt placement

B. Notify the structural engineer immediately with the survey measurements — the engineer must evaluate whether the 3/8inch deviation can be accommodated through field modifications (slotted holes in base plates, shimming, or redrilling) or whether the anchor bolts must be removed and reinstalled at the correct locations before steel erection begins

C. Enlarge the base plate holes to accommodate the bolt offset, which is standard field practice that does not require engineer approval

D. Proceed with erection but add supplemental welds at each base plate to compensate for the bolt misalignment

20. A contractor's project is governed by a GMP contract at $2,900,000 with a 50/50 savings sharing provision. Actual project costs total $2,520,000 and the contractor's fixed fee is $220,000. What does the owner pay?

A. Costs plus fee total $2,740,000. Savings below GMP: $2,900,000 − $2,740,000 = $160,000. Split 50/50: owner receives $80,000 credit, contractor receives $80,000 bonus. Owner pays $2,740,000 + $80,000 = $2,820,000

B. $2,900,000 because the GMP is the guaranteed payment regardless of actual costs

C. $2,520,000 because the owner pays only actual costs and the fee is absorbed within the GMP

D. $2,740,000 because the savings sharing provision does not apply when the fee exceeds 8% of actual costs

21. A contractor's project involves installing a fire alarm system in a new 4story commercial building. After installation, the fire marshal identifies that the contractor installed smoke detectors with a different sensitivity rating than specified. The specified detectors have a 2.5% per foot obscuration sensitivity, but the installed detectors have a 4.0% per foot sensitivity — meaning they are less sensitive and will take longer to detect smoke. What must the contractor do?

A. Accept the installed detectors because all commercially available smoke detectors meet UL certification standards regardless of sensitivity ratings

B. Add additional detectors at closer spacing to compensate for the reduced sensitivity of the installed units

C. Submit an RFI to the architect requesting approval of the alternative sensitivity rating as an acceptable substitution

D. Remove the nonconforming detectors and replace them with the specified 2.5% sensitivity units — fire alarm detector sensitivity is a lifesafety specification that directly affects the system's ability to detect fires early enough to protect building occupants; the less sensitive detectors may not meet the coderequired detection time and delay evacuation

22. A contractor's employee works the following schedule during a single workweek: Monday 9 hours, Tuesday 10 hours, Wednesday off, Thursday 10 hours, Friday 9 hours, Saturday 8 hours. The employee earns $42.00 per hour and is nonexempt. What is the correct gross pay?

A. $1,932, calculated at straighttime for all 46 hours because the employee had a day off during the week

B. $2,100, calculated at $42.00 for 46 regular hours plus a Saturday premium of $168 required by federal law

C. $1,932, which is incorrect — the correct calculation is 40 hours at $42.00 ($1,680) plus 6 overtime hours at $63.00 ($378) = $2,058, because all hours over 40 in the workweek earn the overtime premium regardless of the Wednesday day off or which specific days the hours were worked

D. $2,268, calculated at doubletime for all hours exceeding 8 per day

23. A contractor's project involves installing underground storm drainage. The specification requires a minimum of 6 inches of compacted crushed stone bedding under all pipes. The contractor's crew lays the pipe directly on native soil without any bedding material to save time. The pipe passes the initial pressure test. What longterm risk has the contractor created?

A. Without the specified crushed stone bedding, the pipe rests on uneven native soil that provides inconsistent support — over time, settlement will occur at unsupported sections, causing pipe deflection, joint separation, and eventual system failure; the initial pressure test only confirms the joints are sealed at installation, not that the pipe will remain properly supported under longterm loading conditions

B. No risk because the pipe passed the pressure test, which verifies both the joint integrity and the adequacy of the bedding

C. Only a cosmetic risk because the pipe bedding affects only the surface grade above the pipe, not the pipe's structural performance

D. Only a risk during freezing weather because native soil bedding is adequate in all seasons except winter

24. A contractor's project has a contract that includes a nodamagesfordelay clause. The owner fails to provide timely utility connections, causing a 10week delay. The contractor incurs $140,000 in idle equipment, extended supervision, and additional general conditions costs. The contractor submits a claim for the delay costs. Under what recognized exception might the contractor overcome the nodamagesfordelay clause?

A. The contractor can always overcome the clause by demonstrating that the delay costs exceed $100,000 because the $100,000 threshold automatically voids all nodamagesfordelay provisions

B. The owner's failure to provide timely utility connections may constitute active interference — courts recognize exceptions to nodamagesfordelay clauses for delays caused by the owner's active interference, bad faith, or conduct so unreasonable it was not contemplated at contract formation; a 10week delay caused by the owner's failure to fulfill their own contractual obligation may qualify

C. The contractor can overcome the clause only by proving the owner intentionally caused the delay to harm the contractor's business

D. Nodamagesfordelay clauses can never be overcome regardless of the circumstances because they are absolute contractual bars to all delay claims

25. A contractor operating as an Scorporation has two shareholderemployees. Shareholder A receives a salary of $125,000 and distributions of $85,000. Shareholder B receives a salary of $95,000 and distributions of $65,000. The IRS audits and confirms both salaries as reasonable. What is the total income that avoids selfemployment/payroll taxes?

A. $370,000 (total of all salaries and distributions) because the IRS confirmation means all income avoids employment taxes

B. $220,000 (total salaries only) because distributions are always subject to selfemployment tax in Scorporations

C. $150,000 (combined distributions of $85,000 + $65,000) — the distributions pass through to each shareholder's personal return as ordinary income subject to personal income tax but not

subject to FICA or selfemployment taxes, because both salaries have been confirmed as reasonable by the IRS

D. $0 because the IRS audit triggers reclassification of all distributions as wages regardless of the salary reasonableness determination

26. A contractor's project involves constructing a commercial building on a site where the geotechnical report shows stable soil conditions. During foundation excavation, the contractor encounters a previously unknown underground storage tank containing petroleum residue. The tank was not shown on any project documents and was not identified in the environmental Phase I assessment. Under a standard differing site conditions clause, what is the contractor entitled to?

A. Nothing, because environmental conditions are always excluded from differing site conditions clauses regardless of the contract language

B. Only a time extension but no cost compensation because differing site conditions provisions provide schedule relief only for environmental discoveries

C. The contractor must remediate the tank at their own expense because the fixedprice contract transfers all subsurface risk to the contractor

D. Additional compensation for the cost of tank testing, removal, and remediation, plus a time extension for the resulting delay — the underground storage tank constitutes a Type I differing site condition because actual conditions differ materially from what the contract documents represented (no tank indicated), and the contractor could not have discovered it through a reasonable site examination

27. A contractor's project involves a commercial renovation where the existing building has a flat roof with a parapet wall. Workers are installing new HVAC equipment on the roof at 35 feet above grade. The parapet wall is 44 inches high. Do workers need additional fall protection beyond the parapet?

A. No, because the 44inch parapet meets and exceeds OSHA's approximate 42inch guardrail height requirement — OSHA recognizes parapet walls as equivalent to guardrail systems when they provide adequate height and structural capacity to prevent falls, and 44 inches exceeds the minimum

B. Yes, because parapets are never recognized as fall protection under OSHA standards regardless of height

C. Yes, because workers installing HVAC equipment must wear personal fall arrest systems at all heights above 15 feet regardless of parapet protection

D. No, but only because the workers are performing mechanical installation rather than roofing work — the parapet exemption applies only to nonroofing trades

28. A contractor's project requires the installation of temporary guardrails around all floor openings and roof edges during construction. A carpenter removes a guardrail section to move a large window unit through a floor opening and places it back after 45 minutes. During the 45minute period, no worker falls through the opening. Does the fact that no injury occurred affect whether an OSHA violation exists?

A. Yes, because OSHA can only cite violations where an actual injury or nearmiss has been documented by the employer

B. Yes, because the 45minute removal falls within OSHA's 60minute temporary removal allowance for material handling activities

C. No, because OSHA violations are based on exposure to hazards, not on whether an injury actually occurs — the unprotected floor opening created a fall hazard for any worker who might have approached it during the 45minute period, and the violation exists regardless of whether anyone fell; the employer should have implemented alternative fall protection during the guardrail removal

D. No, but the violation is classified as de minimis (no citation issued) because the guardrail was reinstalled within one hour

29. A contractor's annual financial statements show: revenue $5,800,000, cost of construction $4,640,000, G&A expenses $812,000. The contractor's bonding company requires a minimum net profit margin of 5%. Does the contractor meet this threshold?

A. Yes, because the gross profit margin of 20% far exceeds the 5% minimum and is the metric sureties evaluate

B. The calculation cannot be performed without knowing the contractor's total assets and current liabilities

C. No, because the net profit margin is 4.8% ($276,000 ÷ $5,800,000), falling just below the 5% minimum

D. Yes — net profit is $348,000 ($5,800,000 − $4,640,000 − $812,000), and net profit margin is 6.0% ($348,000 ÷ $5,800,000), exceeding the surety's 5% minimum threshold

30. A contractor's project involves installing a fire sprinkler system. The fire protection engineer's design specifies pendanttype sprinkler heads at a maximum spacing of 130 square feet per head. The contractor's fire sprinkler subcontractor installs the heads at 160 square feet per head — wider than specified — to reduce installation costs. The system passes the hydrostatic pressure test. What problem exists?

A. No problem because the pressure test verifies the system is leakfree and functional, which confirms the installation meets all requirements

B. The wider spacing means each sprinkler head must cover a larger area, potentially creating gaps in coverage where a fire could develop and grow before activating a sprinkler — the system may not suppress a fire quickly enough to protect life and property in the areas between the widely spaced heads, even though the piping is pressuretight; the heads must be reinstalled at the specified 130 square feet maximum spacing

C. Only a documentation issue that can be resolved by updating the asbuilt drawings to show the actual installed spacing

D. The problem is limited to aesthetics because wider spacing creates an uneven ceiling appearance but does not affect fire suppression performance

31. A contractor's project manager reviews the accounts receivable aging report and discovers that a $95,000 receivable from a project completed 6 months ago remains uncollected. The project owner has not responded to three invoices and two phone calls. What escalating collection actions should the project manager take?

A. Send a formal written demand letter via certified mail with a specific payment deadline, follow up with a personal meeting or phone call to the responsible party, evaluate filing a construction lien if the statutory deadline has not expired, consult with legal counsel about initiating a breach of contract action, and consider whether the receivable should be partially reserved as potentially uncollectible on the company's financial statements

B. Write off the $95,000 immediately as a bad debt because any receivable over 90 days is automatically uncollectible under construction industry accounting standards

C. Continue sending monthly invoices indefinitely because persistent billing is the only collection tool available to contractors

D. Report the project owner to MSBOC for nonpayment because the Board has authority to compel owners to pay contractors

32. A contractor's project involves constructing a multistory steel frame building. The steel erection plan calls for fourstory column sections. OSHA's steel erection standard requires

specific anchor bolt requirements before columns can be set. What is the key requirement regarding anchor bolts?

A. Anchor bolts must be installed at exactly the dimensions specified in the erection drawings, and they must not be repaired, replaced, or fieldmodified without the written approval of the project structural engineer of record

B. Anchor bolts must be inspected by OSHA before column erection can begin on any project with columns exceeding two stories

C. Anchor bolts must be manufactured by an OSHAapproved supplier and carry a permanent certification tag

D. Anchor bolts must be installed in accordance with approved erection drawings and must not be repaired, replaced, or fieldmodified without the approval of the project structural engineer of record — this ensures the critical connection between the steel superstructure and the concrete foundation maintains its designed structural integrity

33. A contractor's project has a fixedprice contract for $1,800,000. The contractor's bid included a 3.5% contingency ($63,000). During construction, the contractor uses $48,000 of the contingency for various minor unforeseen conditions. At project completion, $15,000 of contingency remains unused. On a fixedprice contract, who retains the unused contingency?

A. The owner retains the $15,000 because all unused contingency in fixedprice contracts belongs to the project owner as a cost savings

B. The contractor retains the $15,000 — on a fixedprice contract, the bid price is the contract price, and any difference between actual costs and the contract price (including unused contingency) belongs to the contractor; the owner agreed to pay $1,800,000 regardless of the contractor's internal cost allocation

C. The $15,000 is placed in an escrow account until the warranty period expires

D. The $15,000 must be disclosed in the final accounting and split equally between the owner and contractor

34. A contractor discovers that their workers' compensation insurance policy has lapsed due to nonpayment of the premium renewal. The contractor has 8 employees and is currently working on three active projects. What are the immediate consequences?

A. The contractor is operating without mandatory workers' compensation coverage (required for employers with 5+ employees in Mississippi) — if any employee is injured, the contractor loses the exclusive remedy protection and faces personal injury lawsuits seeking unlimited damages; additionally, operating without required WC coverage may violate MSBOC licensing requirements and expose the contractor to regulatory penalties

B. No consequences because workers' compensation lapses allow a 60day grace period for premium renewal

C. Only the contractor's EMR is affected — a lapsed policy increases the EMR by 0.50 points but has no other consequence

D. The consequences are limited to a $500 fine from the Mississippi Workers' Compensation Commission

35. A contractor's project involves a deep utility trench that requires dewatering. The competent person observes that the dewatering pumps have lowered the water level in the trench but the soil on the trench walls is still visibly saturated — dark, glistening, and soft to the touch. The soil was originally classified as Type B when the excavation began three days ago in dry conditions. What must the competent person do?

A. Continue with the Type B classification because the dewatering has removed the standing water and the original classification remains valid

B. Add additional dewatering pumps to further reduce the water content, which will restore the soil to its original Type B classification without requiring reclassification

C. Reclassify the soil based on the current saturated conditions — even though standing water has been removed, the soil walls are still saturated, which reduces cohesion and increases instability; the soil should likely be reclassified to Type C and the protective system upgraded accordingly before workers can reenter the trench

D. Allow workers to enter if they wear waterproof boots and life jackets as additional personal protective equipment for working in wet excavation conditions

36. A contractor operating as a partnership with two equal partners earns $480,000 in net ordinary business income. Partner A also receives a guaranteed payment of $40,000 for management services. What is each partner's selfemployment tax base?

A. Partner A: $240,000 (50% share only), Partner B: $240,000 (50% share only) — guaranteed payments are exempt from selfemployment tax

B. Partner A: $280,000 ($240,000 distributive share + $40,000 guaranteed payment), Partner B: $240,000 (50% distributive share) — both the distributive share and guaranteed payments are subject to selfemployment tax for general partners; each partner's SE tax base is then reduced to 92.35% before applying the 15.3% rate

C. Partner A: $480,000, Partner B: $0 — the managing partner pays all selfemployment tax for the partnership

D. Partner A: $40,000, Partner B: $0 — only guaranteed payments are subject to selfemployment tax, and distributive shares are classified as passive income

37. A contractor's project involves a commercial building where the architect specifies a 2hour firerated floor/ceiling assembly. The contractor installs the assembly but fails to properly firestop the penetrations where plumbing pipes pass through the rated assembly. The building passes the general building inspection. Two years later, a fire on the first floor spreads to the second floor through the unprotected penetrations, causing $600,000 in additional fire damage. Who bears liability for the additional damage caused by the defective firestopping?

A. The building inspector bears sole liability because the inspector certified the building despite the defective firestopping

B. The fire department bears liability because their response time allowed the fire to spread beyond what would have occurred with a faster response

C. The building owner bears sole liability because the owner accepted the building at substantial completion and is responsible for all maintenance of firerated assemblies

D. The contractor likely bears primary liability for the additional damage caused by the missing firestops — properly installed firestopping would have slowed or prevented fire spread through the penetrations, and the contractor's failure to firestop the penetrations is a workmanship deficiency; the building inspector's failure to catch the deficiency does not absolve the contractor of the obligation to install firestopping per specification and code

38. A contractor's project has a contract price of $2,200,000. The contractor's estimator discovers after bid submission that the overhead rate used in the bid (14%) was lower than the actual rate (18%). The project's direct costs are $1,760,000. What is the dollar amount of unrecovered overhead this project will generate?

A. $70,400 — the 4% overhead rate difference (18% − 14%) multiplied by $1,760,000 in direct costs = $70,400 in unrecovered overhead that reduces the project's profit by that amount; at

14%, the overhead allocation was $246,400, but the actual overhead attributable to this project is $316,800 at 18%

B. $35,200, representing half the overhead difference because the error was discovered after bid submission and only the remaining work is affected

C. $0, because overhead rate errors discovered after bid submission can be corrected through a change order

D. $8,800, calculated at 0.5% of the contract price because overhead variances are capped at 0.5% under standard estimating practices

39. A contractor's project involves a 12footdeep trench. The competent person has classified the soil as Type A — the most stable classification. What is the maximum allowable slope for Type A soil, and what special condition would immediately disqualify the soil from this classification?

A. Maximum slope for Type A is 1:1 (45 degrees), and the soil would be disqualified if any vibration source (traffic, equipment) is present within 100 feet

B. Maximum slope for Type A is ¾:1 (53 degrees from horizontal), which is the steepest slope permitted for any soil type; the soil would be immediately disqualified from Type A classification if it has been previously disturbed, if it is subject to vibration from heavy traffic or equipment, or if the excavation is subject to water seepage — any of these conditions requires reclassification to a lower stability rating

C. Maximum slope for Type A is 1½:1 (34 degrees), and the soil cannot be disqualified once the initial classification is confirmed through visual and manual testing

D. Maximum slope for Type A is vertical (90 degrees) because Type A soil can support vertical walls at any depth without protective systems

40. A contractor's project is 92% complete. The architect conducts a presubstantialcompletion walkthrough and identifies that the project will likely achieve substantial completion within two weeks. What events should the contractor prepare for that will be triggered by the certificate of substantial completion?

A. Only the start of the punch list period — no other contractual events are triggered by substantial completion

B. Only the transfer of insurance responsibility from the contractor's builder's risk policy to the owner's permanent property policy

C. The contractor should prepare for multiple simultaneous events: the warranty period will start, retainage release provisions will activate (per contract terms), the owner may take possession and begin occupying the building, liquidated damages exposure will end, the punch list period will begin, and the contractor must ensure all required closeout documents are ready for submission

D. Only the cessation of the contractor's obligation to maintain site safety because the owner assumes all safety responsibility at substantial completion

41. A contractor's project involves a commercial renovation in an occupied building. Workers are installing new ceiling tiles on the 3rd floor while office tenants work on the 2nd floor directly below. Dust and debris from the ceiling installation are falling through gaps in the existing floor structure onto the occupied 2nd floor workspace. What must the contractor do?

A. Continue work and provide dust masks to the 2nd floor tenants because occupiedbuilding renovation inevitably produces some dust migration between floors

B. Install containment barriers (drop cloths, plastic sheeting, or temporary floor protection) on the 2nd floor ceiling or 3rd floor work area to prevent debris from falling onto the occupied space below — the contractor has a duty to protect building occupants from construction hazards, and allowing dust and debris to fall onto an occupied workspace below is both a safety violation and a disruption that must be controlled

C. Notify the building tenants by email that debris may fall during construction and that they should wear hard hats at their desks

D. Restrict 3rd floor work to nights and weekends when the 2nd floor is unoccupied because occupiedbuilding renovation cannot be performed during business hours

42. A contractor operating as a sole proprietor earns $290,000 in net business income. The contractor's accountant recommends forming an LLC and electing Scorporation tax treatment with a reasonable salary of $125,000. What is the approximate annual selfemployment tax savings from this conversion?

A. Approximately $22,700 — as a sole proprietor, SE tax on $290,000 is approximately $39,700 (15.3% on 92.35% of $290,000); with the Scorp election, payroll taxes on $125,000 salary are approximately $19,125 (15.3%); the $165,000 in distributions avoids SE tax; savings ≈ $39,700 − $19,125 ≈ $20,575 to $22,700 depending on wage base calculations

B. Approximately $44,370 because the Scorp election eliminates all employment taxes on both salary and distributions

C. Approximately $5,000 because the IRS limits SE tax savings to a maximum of $5,000 per year for sole proprietors converting to Scorporations

D. Zero because the conversion does not affect selfemployment tax obligations

43. A contractor's project involves a $2,600,000 commercial building. The contractor's bonding company conducts a midyear review and discovers the contractor's current ratio has dropped from 1.40 to 1.02. The contractor's WIP schedule shows $185,000 in overbillings across three projects. What is the surety's likely response?

A. No response because midyear financial fluctuations are normal and sureties only evaluate annual financial statements

B. The surety will automatically increase the contractor's bonding capacity because overbillings indicate strong billing practices

C. The surety will immediately cancel all existing bonds because any current ratio below 1.10 triggers automatic bond cancellation

D. The surety will likely express serious concern — a current ratio dropping to 1.02 indicates the contractor has almost no liquidity buffer, and $185,000 in overbillings means the contractor has been paid for work not yet performed; the surety may require additional collateral, increase monitoring frequency, restrict new bonded work, and potentially reduce the bonding program capacity

44. A contractor's project involves installing a structural steel frame. During erection, a crane lifts a 6,000pound beam that must be positioned 45 feet above grade. The rigging crew uses a twopoint lift with synthetic slings. Before the lift begins, the competent person notices that one sling shows visible fraying on the outer fibers and a small cut in the webbing. What must happen?

A. The lift can proceed because the damage is on the outer protective layer only and does not affect the sling's load capacity

B. The lift can proceed if the crane operator increases the lift speed to minimize the time the damaged sling is under load

C. The damaged sling must be removed from service immediately and replaced with an undamaged sling — OSHA requires that damaged rigging be taken out of service because the visible fraying and cut compromise the sling's rated capacity and could lead to sudden failure, dropping the 6,000pound beam 45 feet; the consequences of a rigging failure at this height would be catastrophic

D. The lift can proceed if a third sling is added as a safety backup in case the damaged sling fails during the lift

45. A contractor's project is governed by a contract that requires the contractor to provide a oneyear warranty on all work. The warranty obligates the contractor to repair defective workmanship that appears during the warranty period. After the oneyear warranty expires, does the contractor have any remaining legal exposure for construction defects?

A. Yes — the warranty establishes a process for handling defects discovered during the warranty period, but it does not necessarily extinguish the owner's legal rights under the applicable statute of limitations or statute of repose, which may extend for several years beyond the warranty expiration; latent defects discovered after the warranty may still give rise to legal claims

B. No, because the warranty expiration terminates all of the contractor's obligations and legal exposure for any defects regardless of when they are discovered

C. Yes, but only for structural defects — nonstructural defects are permanently discharged at warranty expiration

D. No, because Mississippi law limits all construction defect claims to the oneyear warranty period specified in the contract

46. A contractor's project involves the installation of a complex mechanical system. The specifications require the contractor to perform a commissioning process — verifying that all mechanical equipment operates according to the design intent under actual operating conditions. During commissioning, the contractor discovers that the chilled water system produces only 75% of the design cooling capacity. What is the contractor's obligation?

A. Accept the 75% capacity as adequate because commissioning results within 80% of design are considered passing under industry standards

B. Investigate the cause of the capacity shortfall and correct it — commissioning reveals that the system does not perform to specification, and the contractor must troubleshoot the deficiency (undersized equipment, improper piping configuration, air locks, incorrect pump speed, or control system programming errors) and bring the system to 100% of design capacity before the building is occupied

C. Notify the owner that the system will require supplemental portable cooling units during peak summer months to compensate for the 25% capacity shortfall

D. Submit a change order for the cost of upgrading the system because commissioning deficiencies are always classified as design errors

47. A contractor's project has the following WIP data for two projects at yearend. Project A: earned revenue $820,000, billings $780,000. Project B: earned revenue $540,000, billings $610,000. How are these reported on the balance sheet?

A. The projects are combined into a single WIP line showing net underbilling of $30,000 ($40,000 underbilling − $70,000 overbilling = net $30,000 overbilling). Wait: Project A underbilled by $40,000, Project B overbilled by $70,000. Net = $30,000 overbilling. But netting is wrong.

B. Both projects are reported as liabilities because total billings exceed total earned revenue

C. Both projects are reported as assets because total earned revenue exceeds total billings

D. Project A is underbilled by $40,000 ($820,000 earned − $780,000 billed), classified as a current asset; Project B is overbilled by $70,000 ($610,000 billed − $540,000 earned), classified as a current liability — the two amounts are reported separately and never netted, because each represents a different financial condition

48. A contractor's project involves exterior masonry work on a commercial building. The specifications state that mortar joints shall be tooled to a concave profile. The mason subcontractor finishes the joints with a flush (flat) profile instead of concave. The architect notices the nonconforming joint profile during a site visit and rejects the work. The subcontractor argues that flush joints are "just as good" and actually shed water better than concave joints. What is the correct resolution?

A. Accept the flush joints because the subcontractor's technical argument about water shedding is valid and overrides the specification

B. The subcontractor must retool the joints to the specified concave profile — the specification requires concave joints, and the subcontractor cannot unilaterally substitute a different profile regardless of their technical opinion; if the subcontractor believes the flush profile is superior, the proper course would have been to submit a substitution request before installation, not to deviate from the specification without authorization

C. Average the two profiles by using a slightly concave tool that produces a profile between flush and fully concave

D. Accept the flush joints but require the subcontractor to apply a waterproof sealant over all joints to compensate for the changed watershedding characteristics

49. A contractor operating as a Ccorporation retains $300,000 in aftertax earnings over three years. The corporation's accountant advises documenting the business purpose for the retained

earnings. What business purposes would justify retention and protect against the accumulated earnings tax?

A. Planned equipment purchases, facility expansion, working capital for projected growth, bonding capacity improvement, and reserves for specific identified business needs — the IRS examines whether retained earnings serve specific, legitimate business purposes rather than being accumulated to help shareholders avoid personal dividend taxation; documented business plans and board resolutions provide the strongest evidence of legitimate retention

B. Only debt repayment qualifies as a legitimate business purpose for retaining earnings because all other uses trigger the accumulated earnings tax

C. No documentation is needed because the accumulated earnings tax has been repealed and no longer applies to any Ccorporation

D. Only reserves for potential litigation qualify because the IRS does not recognize operational business needs as legitimate reasons for retaining corporate earnings

50. A contractor has completed all 20 practice examinations in their study guide for the Mississippi Law and Business Management exam. The contractor's scores have progressed from 68% on early exams to consistently scoring 8288% on the final exams. The exam is in two days. What does this score progression indicate, and what should the contractor focus on during the remaining time?

A. The progression from 68% to 8288% indicates the contractor is performing worse because higher scores suggest overconfidence rather than genuine knowledge improvement

B. The progression indicates the contractor has not studied enough because scores below 90% demonstrate insufficient preparation for the exam

C. The score progression from 68% to 8288% indicates strong knowledge development and exam readiness — the contractor should spend the remaining time reviewing domains where errors still occur, practicing efficient NASCLA guide navigation for questions requiring reference lookup, verifying examday logistics (ID, calculator, NASCLA guide tabs, testing center location), and getting adequate rest before the exam

D. The progression is meaningless because practice exam scores have no correlation with actual exam performance

Practice Exam 18: Answer Key and Explanations

1. B — Total delay: 24 days. Approved ownercaused extension: 16 days. Contractorcaused delay: 24 − 16 = 8 days. Liquidated damages: 8 × $2,800 = $22,400. Liquidated damages apply

only to delays attributable to the contractor — the 16 documented ownercaused days are excluded through the approved time extension. The contractor's contemporaneous documentation of each ownercaused delay is the critical evidence supporting the reduction.

2. D — Federal corporate tax: $550,000 × 21% = $115,500. The $180,000 dividend distribution will be taxed again on shareholders' personal returns at the applicable qualified dividend rate — creating the classic Ccorporation double taxation where the same corporate earnings are taxed at both the entity and individual levels. This double taxation is the primary reason many small contractors choose Scorporations or LLCs.

3. A — The upper Type B section requires a 1:1 slope (45 degrees), creating 10 feet of horizontal setback per side for the 10foot sloped section. The lower Type C section is protected by the trench shield. This combination system correctly applies the appropriate protection for each soil classification — sloping at the Type B angle above, mechanical shielding for the less stable Type C zone below.

4. C — Two violations exist. First, the fringe package is $4.50 per hour short ($19.50 required − $15.00 provided). Second, overtime for the 10 hours over 40 must be calculated at 1.5 times the basic rate only ($44.00 × 1.5 = $66.00/hr) — the fringe continues at the straighttime rate for overtime hours. The contractor is underpaying both the fringe benefit obligation and the overtime premium.

5. B — Projected actual overhead: $390,000. Applied overhead: $310,000. Actual rate: $390,000 ÷ $2,000,000 = 19.5%. Applied rate: $310,000 ÷ $2,000,000 = 15.5%. The 4% difference × $2,000,000 = $80,000 in unrecovered overhead. Every project bid at the 15.5% rate undercharges overhead by 4% of direct costs, and the $80,000 shortfall comes directly from the company's profit.

6. A — Friable pipe insulation in a 1955 building has a very high probability of containing asbestos. The material has already been disturbed, potentially releasing dangerous fibers. All work must stop immediately, workers must be evacuated, the area must be secured to prevent further disturbance, and qualified asbestos testing must be arranged. Continuing work — even with dust masks — risks serious asbestos exposure that causes fatal diseases.

7. D — A construction change directive (CCD) authorizes the contractor to proceed with changed work immediately while the parties negotiate the final price. This mechanism prevents project delays caused by pricing disputes. The contractor should document all costs carefully — time sheets, material invoices, equipment logs — because the final change order amount may be based on actual documented costs if agreement cannot be reached through negotiation.

8. C — Net worth: $1,280,000 − $890,000 = $390,000 (exceeds the $50,000 minimum for major classifications). Current ratio: $620,000 ÷ $480,000 = 1.29. The 1.29 ratio indicates adequate but not strong liquidity — the contractor has $1.29 in current assets for every $1.00 in current liabilities. Both metrics qualify the contractor for MSBOC commercial licensing.

9. A — An elevator pit 14 feet deep with a single 30inch access opening meets every criterion for a confined space: limited entry/exit, not designed for continuous occupancy, and potential for hazardous atmospheres. Full confined space procedures are mandatory — atmospheric testing, continuous ventilation, trained attendant outside, rescue procedures, written entry

permit, and worker training. Elevator pits can accumulate hazardous gases from building drainage systems.

10. B — Heavy truck traffic generates ground vibration that reduces soil cohesion and increases cavein risk. The competent person must consider vibration as a destabilizing factor when classifying soil adjacent to busy highways. Soil that would otherwise qualify as Type A or Type B may need to be downgraded to a lower stability classification when subject to continuous traffic vibration, requiring more conservative protective measures.

11. D — The $350,000 inventory damage may be recoverable as a direct damage — it was directly caused by the defective waterproofing. The $150,000 in lost business income is a consequential damage barred by the mutual waiver. The classification of the inventory damage depends on the jurisdiction — some courts treat damage to contents caused by defective work as direct damages, while others classify it as consequential. The distinction is critical to the owner's recovery.

12. A — A laceration requiring stitches (beyond first aid) that results in days away from work is recordable on the OSHA 300 Log. The injury is classified as a "days away from work" case — the 3 lost workdays are recorded. Stitches exceed the firstaid threshold under OSHA's recordkeeping standard, and the days away from work trigger the most significant recording category.

13. C — Dangling activities — those without logical predecessors or successors — undermine the entire CPM schedule's integrity. Without proper connections, these activities float freely outside the logical network, their durations cannot affect or be affected by other activities, and the critical path calculation is distorted. A valid CPM schedule requires every activity to be logically connected within the network.

14. D — Completion: $1,041,250 ÷ $1,487,500 = 70%. Earned revenue: 70% × $1,750,000 = $1,225,000. Billings: $1,150,000. Since earned revenue ($1,225,000) exceeds billings ($1,150,000) by $75,000, the project is underbilled. The $75,000 underbilling is classified as a current asset — the contractor has performed work that has not yet been invoiced.

15. A — A proprietary specification with "no substitutions" is binding. The architect made a deliberate design decision to specify that particular product, and the "no substitutions" clause eliminates the contractor's right to propose alternatives. If the contractor wanted to propose the less expensive product, the appropriate time was during bidding through a prebid substitution request — not after the contract is signed.

16. B — DavisBacon requires workers to be paid the prevailing wage for the classification of work actually performed. When a laborer operates a backhoe, they must be paid the equipment operator rate ($36.50 + $17.25) for those hours. The contractor cannot assign a lower classification to reduce wage costs when the worker is performing higherclassified work. Splitclassification days require the appropriate rate for each type of work.

17. D — A breached containment barrier in a hospital is a medical emergency — not a maintenance item. Construction dust and potential pathogens entering an ICU corridor threaten immunocompromised patients who can develop fatal infections from airborne contaminants. All dustgenerating construction must stop immediately, the barrier must be repaired, negative

air pressure must be verified, and hospital infection control staff must be notified to assess patient exposure risk.

18. C — Revised total cost: $1,008,000 + $248,000 = $1,256,000. Original estimate: $1,190,000. Overrun: $66,000. Projected profit: $1,400,000 − $1,256,000 = $144,000, down from $210,000 — a $66,000 (31%) profit erosion. The 80% checkpoint shows $56,000 in overrun ($1,008,000 vs. $952,000 budget), confirming the negative trend requires immediate corrective action.

19. B — The contractor must notify the structural engineer immediately. A 3/8inch deviation exceeds the ±1/8inch specification tolerance by a significant margin. The engineer evaluates whether field modifications can accommodate the offset (slotted holes, shimming) or whether the bolts must be removed and reinstalled correctly. Proceeding with erection on misaligned anchor bolts compromises the columntofoundation connection — the structural integrity of the entire building.

20. A — Costs plus fee: $2,520,000 + $220,000 = $2,740,000. Savings below GMP: $2,900,000 − $2,740,000 = $160,000. Split 50/50: owner receives $80,000 credit, contractor receives $80,000 bonus. Owner pays: $2,740,000 + $80,000 = $2,820,000. Equivalently: $2,900,000 − $80,000 = $2,820,000.

21. D — Smoke detector sensitivity is a lifesafety specification. A 4.0% per foot obscuration detector is significantly less sensitive than the specified 2.5% — it requires nearly twice as much smoke to activate. This delay in detection could allow a fire to grow beyond the point where early suppression or evacuation is effective. The nonconforming detectors must be replaced with the specified sensitivity units.

22. C — Total hours: 46 (9+10+0+10+9+8). Regular: 40 hours × $42.00 = $1,680. Overtime: 6 hours × $63.00 = $378. Total: $2,058. The FLSA calculates overtime on total weekly hours — the Wednesday day off does not reduce the overtime obligation. There is no Saturday premium under federal law. All hours over 40 earn the halftime premium regardless of which days they were worked.

23. A — Without the specified crushed stone bedding, the pipe rests on uneven native soil. Over time, unsupported sections will settle, causing pipe deflection, joint separation, and system failure. The pressure test only confirms initial joint integrity — it does not verify longterm support adequacy. Proper bedding distributes the load evenly along the pipe length and prevents differential settlement that destroys pipe joints.

24. B — Courts recognize exceptions to nodamagesfordelay clauses for owner's active interference, bad faith, or delays so unreasonable they were not contemplated at contract formation. The owner's failure to provide timely utility connections — a contractual obligation — for 10 weeks may constitute active interference. The contractor's $140,000 claim may survive the clause if the facts support this recognized exception.

25. C — Combined distributions: $85,000 + $65,000 = $150,000. With both salaries confirmed as reasonable by the IRS, the Scorporation tax treatment operates as intended. The $150,000 in total distributions passes through as ordinary income subject to personal income tax but not FICA or selfemployment tax. Combined salaries of $220,000 are subject to payroll taxes. The $150,000 savings is the Scorporation's core advantage.

26. D — An unknown underground storage tank not shown in any documents constitutes a Type I differing site condition — actual conditions differ materially from what the documents represented. The Phase I assessment did not identify the tank, and the contractor could not have discovered it through a reasonable site examination. The contractor is entitled to additional compensation for tank removal and remediation costs, plus a time extension for the delay.

27. A — A 44inch parapet exceeds OSHA's approximate 42inch guardrail height requirement. OSHA recognizes parapet walls as equivalent to guardrail systems when they provide adequate height and structural capacity to prevent falls. At 44 inches, the parapet provides sufficient protection for workers performing HVAC installation behind it. No additional fall protection is required as long as workers remain behind the parapet.

28. C — OSHA violations are based on exposure to hazards, not on whether injuries actually occur. The unprotected floor opening created a fall hazard for any worker who might have approached it during the 45minute period. The violation exists regardless of whether anyone fell. The employer should have implemented alternative fall protection (covers, barricades, or a safety attendant) before removing the guardrail.

29. D — Net profit: $5,800,000 − $4,640,000 − $812,000 = $348,000. Net margin: $348,000 ÷ $5,800,000 = 6.0%. The 6.0% net margin exceeds the surety's 5% minimum threshold. The contractor meets the bonding qualification. The 20% gross margin ($1,160,000 ÷ $5,800,000) indicates healthy projectlevel profitability.

30. B — The wider spacing means each sprinkler head covers 160 square feet versus the specified 130 square feet maximum — 23% more area per head. This creates coverage gaps where a fire could grow before activating a sprinkler. The system may not suppress fires quickly enough in the underprotected zones between heads. The heads must be reinstalled at the specified 130 square foot maximum spacing regardless of the pressure test results.

31. A — Escalating collection actions follow a logical progression: formal demand letter via certified mail, personal followup, lien filing evaluation (if the statutory deadline permits), legal consultation for breach of contract action, and financial statement reserves for potentially uncollectible amounts. A $95,000 receivable uncollected for 6 months after project completion requires aggressive action — passive invoicing is insufficient.

32. D — OSHA's steel erection standard requires anchor bolts to be installed per approved erection drawings and prohibits field repair, replacement, or modification without the structural engineer of record's approval. Anchor bolts are the critical connection between the steel superstructure and the concrete foundation. Unauthorized modifications compromise the structural integrity that the engineer designed to support the entire building.

33. B — On a fixedprice contract, the bid price is the contract price. The contractor retains the $15,000 unused contingency as profit — the owner agreed to pay $1,800,000 regardless of the contractor's internal cost allocation. Unused contingency, like all cost savings on fixedprice contracts, belongs to the contractor. The contingency was the contractor's risk reserve, and unused reserves are the contractor's financial benefit.

34. A — Operating without workers' compensation when required (5+ employees in Mississippi) creates severe exposure: loss of the exclusive remedy doctrine (employees can file personal injury lawsuits seeking unlimited damages), potential MSBOC licensing violations,

regulatory penalties, and inability to demonstrate insurance compliance required by contract. The contractor must immediately restore coverage and address the premium delinquency.

35. C — Even though standing water has been removed, the visibly saturated soil walls indicate the soil's cohesive strength has been compromised. Saturated soil is fundamentally different from dry soil — water reduces interparticle bonding and increases the soil mass weight. The competent person must reclassify based on current conditions (likely Type C), upgrade the protective system, and verify the new protection is adequate before allowing reentry.

36. B — Partner A: $240,000 distributive share + $40,000 guaranteed payment = $280,000 SE tax base. Partner B: $240,000 distributive share = $240,000 SE tax base. For general partners, both distributive shares and guaranteed payments are subject to selfemployment tax. Each partner's SE base is then reduced to 92.35% before applying the 15.3% rate.

37. D — The contractor failed to firestop the pipe penetrations through the 2hour rated assembly. Properly installed firestopping would have slowed or prevented fire spread through the penetrations. The contractor's workmanship deficiency directly caused the additional $600,000 in damage. The building inspector's failure to catch the deficiency does not absolve the contractor — the contractor's obligation to install firestopping per specification and code exists independently.

38. A — Overhead rate difference: 18% − 14% = 4%. Unrecovered overhead: 4% × $1,760,000 = $70,400. The applied overhead allocation was $246,400 (14% × $1,760,000), but the actual overhead attributable to this project is $316,800 (18% × $1,760,000). The $70,400 shortfall comes directly from the project's profit margin and cannot be recovered because the contract price is already fixed.

39. B — Type A is the steepest allowable slope at ¾:1 (53 degrees). Soil is immediately disqualified from Type A if it has been previously disturbed, is subject to vibration from traffic or equipment, or is subject to water seepage — any of these conditions requires reclassification to a lower stability rating. Type A must meet all criteria simultaneously: high cohesive strength, undisturbed, not subject to vibration, and no water.

40. C — Substantial completion triggers multiple simultaneous events: warranty period starts, retainage release activates, the owner may take possession, liquidated damages exposure ends, and the punch list period begins. The contractor should ensure all closeout documents are prepared, insurance transitions are coordinated, and the team is ready to address punch list items promptly after the certificate is issued.

41. B — The contractor must install containment barriers to prevent construction debris from falling onto occupied spaces below. This can include drop cloths, plastic sheeting, or temporary floor/ceiling protection between the work area and the occupied space. The contractor has a duty to protect building occupants from construction hazards — allowing dust and debris to fall onto workers at their desks is unacceptable.

42. A — As sole proprietor, SE tax on $290,000 ≈ $39,700 (15.3% on 92.35% × $290,000). With Scorp election and $125,000 salary, payroll taxes ≈ $19,125 (15.3% on $125,000). The $165,000 in distributions avoids SE tax. Savings: approximately $39,700 − $19,125 ≈ $20,575$22,700 depending on wage base calculations. The savings come from removing the $165,000 distribution from the SE tax base.

43. D — A current ratio dropping to 1.02 means the contractor has almost no liquidity buffer — $1.02 in current assets for every $1.00 in current liabilities. Combined with $185,000 in overbillings (being paid for unperformed work), the surety sees two serious warning signs simultaneously. The surety will likely require additional collateral, increase monitoring, restrict new work, and potentially reduce bonding capacity.

44. C — A sling with visible fraying and a cut in the webbing must be removed from service immediately. The damage compromises the sling's rated capacity and could cause sudden failure under load. At 45 feet above grade, a 6,000pound beam falling from a failed sling would be catastrophic. OSHA requires inspection of rigging before each use and immediate removal of any damaged components.

45. A — The oneyear warranty establishes a process for handling defects during that period, but it does not extinguish the owner's legal rights under the statute of limitations or statute of repose. Latent defects — those not discoverable during the warranty period — may give rise to claims years after the warranty expires. The statutory time limits vary by state but typically extend well beyond the contractual warranty period.

46. B — Commissioning reveals the system delivers only 75% of design capacity — a significant deficiency. The contractor must troubleshoot the cause (undersized equipment, piping errors, air locks, pump speed, control programming) and bring the system to 100% of design capacity. Commissioning exists precisely to identify and correct these deficiencies before occupancy. Accepting 75% capacity defeats the entire purpose.

47. D — Project A is underbilled by $40,000 ($820,000 earned − $780,000 billed), classified as a current asset. Project B is overbilled by $70,000 ($610,000 billed − $540,000 earned), classified as a current liability. The amounts are reported separately on the balance sheet — never netted — because each represents a different financial condition. Netting would obscure the contractor's actual billing position.

48. B — The specification requires concave joints, and the subcontractor installed flush joints without authorization. Regardless of the subcontractor's technical opinion about water shedding, the contract documents govern. The subcontractor must retool the joints to the specified concave profile. If the subcontractor believed flush joints were superior, the proper course was a preinstallation substitution request through the architect.

49. C — Legitimate business purposes for retaining earnings include planned equipment purchases, facility expansion, working capital for projected growth, bonding capacity improvement, and reserves for specific identified needs. The IRS examines whether retention serves genuine business purposes rather than avoiding shareholder dividend taxation. Board resolutions documenting the specific business purpose and timeline for each retained amount provide the strongest protection.

50. C — The progression from 68% to 8288% demonstrates clear knowledge development and increasing exam readiness. The contractor should spend the remaining time on targeted activities: reviewing domains where errors persist, practicing efficient reference guide navigation, verifying exam logistics (ID, calculator, NASCLA guide tabs, testing center), and getting adequate rest. Broad restudying or additional fulllength exams are less productive than targeted refinement at this stage.