

PRACTICE EXAM 19: 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 \$2,750,000. At the 85% completion point, the contractor's revised cost projection shows total estimated costs of \$2,810,000 — exceeding the contract price by \$60,000. Under GAAP's percentageofcompletion method, how must this projected loss be handled?

- A. The loss should be deferred until the project reaches 100% completion because interim loss projections are not recognized under the percentageofcompletion method
- B. The loss should be recognized proportionally — 85% of \$60,000 (\$51,000) in the current period and the remaining \$9,000 at completion
- C. The full \$60,000 anticipated loss must be recognized immediately in the current period — GAAP requires immediate recognition of the entire anticipated loss as soon as a loss is projected, regardless of the completion percentage
- D. The loss should be recognized only if the revised cost estimate has been reviewed and approved by the project owner

2. A Mississippi contractor holds a commercial Building Construction license and wants to add an Electrical specialty classification. What must the contractor do to obtain the additional classification?

A. Pass the Electrical trade examination administered by PSI and pay the \$100 additional specialty fee — each specialty classification requires its own examination and fee regardless of existing classifications held

B. Submit a written request to MSBOC without any examination because the Building Construction license already includes electrical work within its scope

C. Hire a licensed master electrician as an employee, which automatically extends the license to cover electrical work

D. Complete 40 hours of electrical continuing education coursework approved by MSBOC in lieu of the trade examination

3. A contractor operating as a Ccorporation earns \$480,000 in taxable corporate income. After paying federal and Mississippi corporate taxes, the corporation distributes \$160,000 in dividends. What is the approximate Mississippi corporate income tax on the \$480,000?

A. \$0 because Mississippi does not impose corporate income tax on construction companies

B. \$24,000, calculated at 5% on the full \$480,000 without any exemption threshold

C. \$48,000, calculated at 10% on the full \$480,000 because Mississippi's corporate rate for construction companies is 10%

D. \$23,500, calculated at 5% on \$470,000 (income above the \$10,000 threshold) — Mississippi's corporate income tax rate is 5% applied only to taxable income exceeding \$10,000

4. A contractor's project involves a 16footdeep trench for utility installation. The competent person classifies the soil as Type C — the least stable classification. The contractor selects a trench shield as the protective system. The shield is 10 feet tall and positioned in the lower portion of the trench. The upper 6 feet must be sloped. What is the required horizontal setback for each side of the sloped upper section?

A. 6 feet per side because Type C soil uses a 1:1 slope ratio regardless of the depth of the sloped section

B. 9 feet per side — Type C soil requires a 1½:1 slope, meaning for every 1 foot of depth, the slope extends 1.5 feet horizontally; for the 6foot sloped section: $6 \times 1.5 = 9$ feet of horizontal run on each side

C. 4.5 feet per side because the slope calculation for the upper section uses the halfdepth method for Type C soil in combination excavations

D. 3 feet per side because the trench shield in the lower portion provides sufficient stability for a reduced slope angle above

5. A contractor's project manager receives a monthly job cost report showing the following: budgeted labor cost \$420,000, actual labor cost to date \$315,000, percentage complete 65%, prorated budget \$273,000 ($65\% \times \$420,000$). What does the \$42,000 variance (\$315,000 actual vs. \$273,000 budget) indicate?

A. The project is \$42,000 under budget because actual costs have not yet reached the total budget of \$420,000

B. The variance is favorable because \$315,000 is less than the total \$420,000 budget

C. The project's labor costs are \$42,000 over the prorated budget at 65% completion — actual costs are running 15.4% above the budgeted pace, and if this overrun rate continues, total labor costs will reach approximately \$484,600 versus the \$420,000 budget, consuming \$64,600 of the project's profit

D. The variance is insignificant because it represents less than 10% of the total labor budget

6. A contractor's employee is working at the edge of a flat commercial roof, 26 feet above grade, installing metal coping. The employee trips over a coiled extension cord and stumbles toward the unprotected roof edge. Only a quick grab of a structural member prevents the employee from falling. No injury occurs. Under OSHA, does this nearmiss require any action?

A. Yes — although OSHA does not require nearmisses to be recorded on the OSHA 300 Log (because no injury occurred), the nearmiss reveals a serious hazard that must be addressed: the unprotected roof edge at 26 feet without fall protection is an OSHA violation regardless of whether anyone is injured, the tripping hazard from the coiled cord must be corrected, and the employer should investigate the incident to prevent an actual fall

B. No action is required because no injury occurred and OSHA only regulates incidents that result in recordable injuries

C. Only documentation in the daily report is required because nearmisses are informational records with no regulatory significance

D. Only a verbal warning to the employee who tripped is required because nearmisses are classified as employee behavior issues rather than employer safety violations

7. A contractor's project involves constructing a commercial building on a site where the contract documents include a geotechnical report showing uniform clay soil to a depth of 25 feet. During excavation for the foundation at 12 feet, the contractor encounters a 4-foot layer of loose sand and gravel that was not indicated in the geotechnical report. The loose material requires additional excavation and engineered fill, costing \$68,000 and adding 2 weeks to the schedule. Under a standard differing site conditions clause, what is the contractor entitled to?

A. Nothing because the contractor should have conducted their own independent geotechnical investigation before bidding

B. Additional compensation of \$68,000 and a 2-week time extension — the sand and gravel layer constitutes a Type I differing site condition because actual subsurface conditions differ materially from those indicated in the geotechnical report included in the contract documents

C. Only a time extension but no compensation because differing site conditions clauses provide schedule relief only

D. Only half the cost (\$34,000) because the contractor shares subsurface risk equally with the owner on all fixed-price contracts

8. A contractor operating as a sole proprietor earns \$310,000 in net business income. The contractor forms an LLC and elects S corporation tax treatment with a reasonable salary of \$135,000. What is the approximate self-employment tax savings on the \$175,000 in distributions?

A. Approximately \$48,000, representing the full SE tax on the entire \$310,000 because the S corp election eliminates all employment taxes

B. Approximately \$12,000, representing only the employee's half of FICA on the distribution amount

C. Zero because distributions from S corporations are always subject to self-employment tax

D. Approximately \$24,000 — calculated as $\$175,000 \times 92.35\% \times 15.3\% \approx \$24,700$; the distributions avoid the 15.3% SE tax that would apply if the income were earned as a sole proprietor

9. A contractor's project has a contract that includes a document hierarchy: (1) change orders, (2) agreement, (3) supplementary conditions, (4) general conditions, (5) specifications, (6) drawings. The supplementary conditions require a 5-day notice period for all claims. The general conditions require a 14-day notice period for claims. Which notice period governs, and what is the consequence of using the wrong one?

- A. The 14day period from the general conditions governs because general conditions are always the controlling document for procedural requirements
- B. Both periods apply simultaneously and the contractor must submit notice under both deadlines
- C. The 5day period from the supplementary conditions governs because supplementary conditions rank higher than general conditions in the precedence hierarchy — submitting notice on Day 8 (within 14 days but beyond 5 days) may result in waiver of the claim because the governing deadline was missed
- D. Neither period is enforceable because claim notice deadlines are advisory guidelines that courts do not enforce

10. A contractor's project involves a commercial renovation in an occupied building. Workers are using a gaspowered generator on the 2nd floor to power tools because the building's temporary electrical system does not reach the work area. Office workers on the 1st floor complain of headaches and a strong exhaust smell. What is the hazard and what must the contractor do?

- A. The gaspowered generator produces carbon monoxide (CO) exhaust that is migrating to the 1st floor occupied area — the contractor must immediately shut down the generator, ventilate all affected areas, evacuate symptomatic workers for medical evaluation, and relocate the generator to an outdoor location or provide adequate ventilation and continuous CO monitoring if indoor operation is unavoidable
- B. The hazard is noise from the generator, and the contractor must provide hearing protection to the 1st floor office workers
- C. The hazard is vibration from the generator affecting the building structure, and the contractor must install vibration isolation pads
- D. No hazard exists because generators are designed for indoor use and the exhaust smell is normal and nontoxic

11. A contractor's financial statements show: revenue \$4,400,000, cost of construction \$3,520,000, G&A expenses \$572,000. What are the gross profit, gross margin, net profit, and net margin?

- A. Gross profit is \$572,000 (13%) and net profit is \$880,000 (20%) because G&A is subtracted from revenue first to determine gross profit

B. Gross profit is \$880,000 (20% margin = $\$880,000 \div \$4,400,000$) and net profit is \$308,000 (7% margin = $\$308,000 \div \$4,400,000$) — gross profit measures profitability from construction operations before overhead, while net profit measures bottomline profitability after all expenses

C. Gross profit is \$308,000 (7%) and net profit is \$880,000 (20%) because the metrics are inversely related

D. Both gross and net margins are 13.5%, calculated by dividing total expenses by revenue

12. A contractor's project involves installing a temporary scaffolding system on a commercial building. The scaffold will be used by multiple trades over a 4month period. Under OSHA's scaffolding standards, who must inspect the scaffold and when?

A. Each individual worker must inspect the scaffold before climbing it each day, but no formal competent person inspection is required

B. The scaffold manufacturer must send a certified inspector weekly to verify the scaffold meets factory specifications

C. OSHA requires a government inspector to certify the scaffold before workers can use it, with recertification required every 30 days

D. A competent person designated by the employer must inspect the scaffold before each work shift and after any event that could affect structural integrity — such as storms, earthquakes, impact by equipment, or modifications to the scaffold structure

13. A contractor's project has the following WIP data: contract price \$1,950,000, estimated total cost \$1,657,500, actual costs \$1,160,250, billings \$1,250,000. Using percentageofcompletion, what is the completion percentage, earned revenue, and billing status?

A. Completion is 59.5% and earned revenue is \$1,250,000 because revenue always equals billings under GAAP

B. Completion is 70% and earned revenue is \$1,950,000 because full revenue recognition is triggered at 70% completion

C. Completion is 70% ($\$1,160,250 \div \$1,657,500$), earned revenue is \$1,365,000 ($70\% \times \$1,950,000$), and the project is underbilled by \$115,000 because earned revenue of \$1,365,000 exceeds billings of \$1,250,000 — the \$115,000 underbilling is classified as a current asset

D. Completion is 64.1% and earned revenue is \$1,160,250 because earned revenue always equals costs incurred

14. A contractor's project involves a \$2,600,000 public school building. The contract requires performance and payment bonds at 100%. A plumbing subcontractor completes \$95,000 of work and is not paid by the general contractor. The property is publicly owned. What remedy is available to the subcontractor?

A. File a construction lien against the school property because all properties — including public buildings — are subject to construction liens in Mississippi

B. File a claim against the payment bond — liens cannot be filed against publicly owned property, and the payment bond serves as the substitute remedy that guarantees payment to subcontractors, suppliers, and laborers on public projects

C. File a claim against the performance bond because the performance bond covers all payment obligations on public projects

D. The subcontractor has no remedy because public project subcontractors are excluded from both lien rights and bond claim rights

15. A contractor's employee works the following hours in a workweek: Monday 11, Tuesday 10, Wednesday 9, Thursday 11, Friday 10, Saturday 4. The employee's regular rate is \$44.00 per hour. What is the correct gross pay under the FLSA?

A. \$2,420, calculated at \$44.00 for all 55 hours because the FLSA overtime threshold for construction is 60 hours per week

B. \$2,420, calculated at straighttime for all 55 hours because the employee worked fewer than 8 hours on Saturday

C. \$2,640, calculated at doubletime for all Saturday hours and timeandahalf for all daily hours exceeding 8

D. \$2,750 — 40 hours at \$44.00 (\$1,760) plus 15 overtime hours at \$66.00 (\$990) = \$2,750, because the FLSA requires 1.5 times the regular rate for all hours exceeding 40 in the workweek regardless of daily hours or which day of the week the overtime occurs

16. A contractor's project involves constructing a retaining wall. The structural specifications require #5 rebar at 12 inches on center horizontally. The contractor's crew installs #4 rebar at 16 inches on center to save time and material. The formwork is in place but the concrete has not been poured. The project superintendent discovers the deviation during a prepour inspection. What should the superintendent do?

- A. Accept the #4 rebar at 16 inches because the difference is minor and the concrete pour is scheduled for the next morning
- B. Allow the pour to proceed and note the deviation in the asbuilt drawings for the structural engineer's postconstruction review
- C. Stop the work and require the crew to remove the incorrect #4 rebar and replace it with the specified #5 rebar at 12 inches on center before the pour — the structural engineer designed the reinforcement for specific loads, and substituting smaller rebar at wider spacing significantly reduces the wall's loadcarrying capacity
- D. Add a second layer of #4 rebar at 16 inches offset from the first layer to double the reinforcement area and compensate for the smaller bar size

17. A contractor's project is governed by a GMP contract at \$3,400,000 with a 60/40 savings sharing provision (60% owner, 40% contractor). Actual costs are \$2,890,000 and the contractor's fee is \$250,000. What does the owner pay?

- A. Costs plus fee total \$3,140,000. Savings below GMP: $\$3,400,000 - \$3,140,000 = \$260,000$. Owner's 60% share: \$156,000 credit. Contractor's 40% share: \$104,000 bonus. Owner pays: $\$3,140,000 + \$104,000 = \$3,244,000$
- B. \$3,400,000 because the GMP is the guaranteed payment regardless of actual costs
- C. \$2,890,000 because the owner pays only actual costs and the fee is absorbed within the GMP
- D. \$3,140,000 because savings sharing does not apply when the fee exceeds 8% of costs

18. A contractor's project involves a deep excavation adjacent to an existing 4-story office building. The building's foundation extends 8 feet below grade. The excavation will extend to 22 feet — 14 feet below the adjacent building's foundation. What critical concern must the contractor address before excavating below the adjacent foundation?

- A. Only traffic control around the excavation perimeter because the adjacent building's structural stability is the building owner's responsibility
- B. Only noise mitigation because the excavation equipment will disturb the office building's occupants
- C. Only dust control because the excavation will generate airborne particles that may affect indoor air quality in the adjacent building

D. The contractor must address the support and protection of the adjacent building's foundation — excavating 14 feet below an existing foundation removes the soil that provides lateral support, creating a risk of foundation undermining, settlement, or structural failure; underpinning, shoring, or other engineered support systems must be designed by a structural engineer and installed before excavation proceeds below the adjacent foundation level

19. A contractor's project has a contract that includes both a liquidated damages clause (\$2,200 per day) and a mutual waiver of consequential damages. The project is completed 20 days late, causing the owner to lose \$85,000 in expected rental income. What is the maximum the owner can recover?

A. \$129,000 (\$44,000 liquidated damages + \$85,000 lost rental income) because the waiver does not apply to delay-related losses

B. \$44,000 in liquidated damages only ($20 \times \$2,200$) — the mutual waiver bars the \$85,000 in lost rental income because it is a consequential damage, and the liquidated damages clause provides the exclusive remedy for delay at the preagreed daily rate

C. \$85,000 in lost rental income only because liquidated damages clauses are voided when a waiver of consequential damages exists in the same contract

D. \$0 because the mutual waiver eliminates all delay remedies including liquidated damages

20. A contractor's project involves installing a new fire alarm system in a commercial building. The fire alarm subcontractor installs smoke detectors with a sensitivity rating different from the specification. The installed detectors are less sensitive — requiring more smoke to trigger an alarm. The system passes the fire marshal's functional test because the test uses concentrated smoke directly at the detector. What is the real-world problem with the less sensitive detectors?

A. No problem because the system passed the fire marshal's functional test, which confirms adequate performance under all conditions

B. Only an aesthetic problem because less sensitive detectors have a different appearance than the specified units

C. In an actual fire, the less sensitive detectors will take longer to detect smoke — especially in large open areas where smoke concentration builds slowly — potentially delaying alarm activation, evacuation notification, and fire department dispatch, and allowing the fire to grow beyond the point where suppression systems can control it

D. Only a warranty issue because the manufacturer of the less sensitive detectors may not honor the warranty if they are used outside their intended application

21. A contractor's project involves a commercial building where the architect specifies a particular type of structural adhesive for bonding steel connections. The contractor's ironwork subcontractor uses a different adhesive that the subcontractor claims is "equivalent." The architect discovers the substitution during a site visit. Under standard contract administration principles, what is the correct resolution?

A. The architect has the authority to reject the unauthorized substitution and require the subcontractor to remove the nonconforming adhesive and reinstall using the specified product — material substitutions require formal submittal through the contractual process and written approval from the architect before installation, regardless of the subcontractor's assessment of equivalence

B. The architect must accept the substitution because the subcontractor has more expertise in structural adhesive selection than the architect

C. The architect can reject the adhesive but cannot require removal — the subcontractor is only required to provide an extended warranty to compensate for the different product

D. The substitution is automatically approved because the subcontractor used a product from the same manufacturer as the specified adhesive

22. A contractor's project has a fixed-price contract for \$1,600,000. The original estimate included \$1,360,000 in costs and \$240,000 in profit (15% margin). At the 75% completion point, actual costs are \$1,088,000 versus a prorated budget of \$1,020,000 ($75\% \times \$1,360,000$). The revised cost to complete is \$370,000. What is the projected profit?

A. Projected profit is \$240,000 unchanged because the project has not yet reached the 80% threshold for reliable profit projection

B. Projected total cost is \$1,458,000 ($\$1,088,000 + \$370,000$), reducing projected profit from \$240,000 to \$142,000 — the project is \$98,000 over the original cost estimate, with the 75% checkpoint showing a \$68,000 overrun ($\$1,088,000$ vs. $\$1,020,000$ budget) and the remaining 25% projected at \$30,000 over budget ($\$370,000$ vs. $\$340,000$)

C. Projected profit is \$512,000 because the remaining budget of \$272,000 is less than the cost to complete, creating additional profit through the variance

D. Projected profit is \$0 because any midproject overrun eliminates all profit on fixed-price contracts

23. A contractor's project involves a 10-foot-deep excavation. The competent person classifies the soil as Type A after performing visual and manual tests. Two hours into the excavation, a

large dump truck delivering backfill material parks within 3 feet of the trench edge and begins dumping. What concern should the competent person have?

- A. Only a noise concern because the dump truck will make communication difficult between workers in the trench
- B. Only a dust concern because the dumping operation will create airborne particles that affect workers in the trench
- C. Only a traffic safety concern because the truck may roll into the trench if the parking brake fails
- D. The surcharge loading from the heavy truck parked near the trench edge creates additional lateral pressure on the trench walls — the weight of the loaded dump truck within 3 feet of the edge can exceed the soil's bearing capacity and trigger a cavein; the competent person should require the truck to be moved back to a safe distance and may need to reclassify the soil or upgrade the protective system

24. A contractor's project involves a commercial building renovation. The existing building has a 2-hour fire-rated corridor wall. The renovation requires running new electrical conduit through the fire-rated wall. After installing the conduit, the contractor must restore the fire rating at the penetration point. What method is required?

- A. Stuffing fiberglass insulation into the gap around the conduit penetration because fiberglass is a noncombustible material that provides fire resistance
- B. Applying standard construction caulk around the conduit to seal the penetration against air infiltration, which provides adequate fire resistance
- C. Installing a listed firestop system rated for the same fire-resistance period as the wall assembly (2 hours) — the firestop must be a tested and listed system that maintains the wall's fire rating at the point of penetration, because an unprotected penetration creates an opening through which fire and smoke can spread, defeating the wall's protective purpose
- D. Wrapping the conduit with duct tape at the penetration point because the conduit itself is metal and provides fire resistance

25. A contractor's project has a contract that includes a "paywhenpaid" clause. The owner pays the contractor on May 1. The clause requires payment to subcontractors within 10 days. The contractor pays three subcontractors: Sub A on May 8 (Day 7), Sub B on May 15 (Day 14), and Sub C on May 20 (Day 19). Which payments are timely?

A. Only Sub A's payment (May 8, Day 7) is timely — the 10day deadline means payment was due by May 11, and both Sub B (May 15, Day 14) and Sub C (May 20, Day 19) are late, constituting breaches of the paywhenpaid timing obligation for those two subcontractors

B. All three payments are timely because Mississippi law provides a mandatory 30day payment period that overrides any shorter contractual deadline

C. All three payments are timely because the 10day deadline is measured from the date the contractor deposits the owner's payment, not from the date of receipt

D. None of the payments are timely because paywhenpaid clauses require sameday payment to subcontractors

26. A contractor's project involves a multistory commercial building. The steel erection plan calls for temporary guying of columns until permanent connections are completed. During a weekend when no workers are on site, a windstorm topples three columns that were erected but not yet permanently braced or temporarily guyed. What does this incident reveal?

A. A design deficiency because the structural engineer should have specified selfsupporting columns that do not require temporary bracing

B. A failure in the steel erection stability plan — OSHA requires columns to be adequately stabilized (braced, guyed, or otherwise secured) before workers leave the site; leaving erected columns without temporary support over a weekend creates a collapse hazard from predictable forces like wind, and the erection plan should have required stabilization before the crew departed

C. A weather forecasting failure because the contractor should have predicted the windstorm and delayed steel erection by one week

D. An acceptable incident because weekend storms are classified as force majeure events that exempt the contractor from all liability for unsecured structural elements

27. A contractor's project has a contract price of \$1,200,000 and estimated total costs of \$1,020,000. The contractor wants to verify the profit margin and the equivalent markup on cost. What are the correct figures?

A. Margin is 15% ($\$180,000 \div \$1,200,000$) and markup is 17.65% ($\$180,000 \div \$1,020,000$) — margin is expressed as a percentage of selling price while markup is expressed as a percentage of cost, and markup is always a higher percentage than the equivalent margin

B. Margin and markup are both 15% because the two calculations always produce identical percentages

C. Margin is 17.65% and markup is 15%, reversing the actual relationship between the two metrics

D. Margin is 15% and markup is 30%, calculated by doubling the margin to convert from selling price based to cost based measurement

28. A contractor's project involves installing a fire suppression system in a new commercial building. The fire protection specifications require the system to deliver a minimum water density of 0.20 gallons per minute per square foot over the design area. During the acceptance test, the system delivers 0.17 GPM/SF — 15% below the specification. The subcontractor argues this is "close enough." Is the subcontractor's argument valid?

A. Yes, because fire suppression systems are designed with substantial safety margins and a 15% reduction in water density does not materially affect performance

B. Yes, because the acceptance test uses theoretical conditions that do not reflect actual fire conditions, and real world performance always exceeds test results

C. No, because fire suppression water density is a lifesafety specification — delivering 0.17 GPM/SF instead of the required 0.20 GPM/SF means the system may not control or suppress a fire in the design area, potentially allowing fire growth beyond the system's capacity; the subcontractor must identify and correct the deficiency (undersized piping, insufficient water supply, incorrect head selection, or hydraulic calculation errors) before the system can be accepted

D. No, but only because the 15% reduction exceeds the 10% tolerance allowed by NFPA standards for fire suppression system testing

29. A contractor's employee sustains a serious injury — hospitalization with a broken femur — after falling through an unprotected floor opening on the 3rd floor of a building under construction. The floor opening had no cover, guardrail, or warning sign. Under OSHA, what are the reporting and regulatory consequences?

A. Only recording on the OSHA 300 Log is required because falls through floor openings are classified as routine construction incidents

B. The hospitalization must be reported to OSHA within 24 hours, and the unprotected floor opening is a fall protection violation that will likely result in a serious or willful citation with significant penalties — OSHA requires all floor openings to be guarded by covers or guardrails,

and the complete absence of any protection demonstrates a knowing disregard for a fundamental safety requirement

C. Only a verbal report to the company's safety director is required because floor opening falls are classified as "employee responsibility" incidents

D. The incident must be reported within 7 days through the standard OSHA recordkeeping process without any additional consequences

30. A contractor's project involves a commercial building with a contract that specifies 10% retainage. The project reaches the 90% completion point. The contract includes a provision allowing the owner to reduce retainage to 5% after 50% completion if the contractor demonstrates satisfactory progress. The contractor has met this standard. What is the financial benefit of the retainage reduction on a \$2,000,000 contract?

A. The retainage reduction has no financial benefit because the total retainage held at project end is the same regardless of the rate applied to individual progress payments

B. Increased retainage of 15% because the original 10% and the new 5% are cumulative rather than substitutional

C. The benefit is limited to a onetime \$10,000 credit applied to the final payment application

D. The retainage reduction from 10% to 5% on remaining billings significantly improves cash flow — for example, on a \$200,000 monthly billing, the contractor receives \$190,000 (at 5% retainage) instead of \$180,000 (at 10%), freeing \$10,000 per month in additional cash flow during the critical final phase of construction

31. A contractor's project involves a renovation of a 1970 commercial building. The renovation requires removing existing ceiling tiles, plaster walls, and floor tiles. Before beginning demolition, the contractor should presume what about these materials in a building of this vintage?

A. All materials in buildings from 1970 are asbestosfree because asbestos was banned in all construction materials by 1965

B. Only the floor tiles may contain asbestos — ceiling tiles and plaster from this era are always asbestosfree

C. All three materials — ceiling tiles, plaster (including joint compound), and floor tiles — should be presumed to potentially contain asbestos until testing proves otherwise, because all

were commonly manufactured with asbestos before regulatory restrictions in the late 1970s and 1980s

D. Only the plaster may contain asbestos — ceiling tiles and floor tiles from 1970 used synthetic materials exclusively

32. A contractor's project has the following scenario: the project manager discovers that the overhead rate used in the bid (15%) is lower than the actual rate (19%) because the company's insurance premiums and office rent both increased significantly since the rate was last calculated. The project's direct costs are \$880,000. What is the dollar impact of the overhead rate error?

A. \$35,200 in unrecovered overhead — the 4% difference (19% – 15%) multiplied by \$880,000 in direct costs means this project carries \$35,200 less overhead than the company actually needs to cover its operating expenses, directly reducing the project's contribution to company profitability

B. \$17,600 because the overhead error is split equally between the project and the company's general fund

C. \$0 because overhead rate errors cannot be quantified on individual projects

D. \$88,000 because the overhead error is calculated on the full contract price rather than on direct costs

33. A contractor's project involves installing underground water lines in a residential subdivision. The contractor calls Mississippi 811 two working days before the planned excavation date. The utility company marks existing gas, electric, and telecommunications lines. During excavation, the contractor's backhoe strikes and ruptures an unmarked water line. Who is primarily liable for the damage?

A. The contractor is primarily liable because the contractor should have visually inspected for all underground utilities before excavation regardless of the 811 response

B. The excavation equipment manufacturer is liable because the backhoe should have been equipped with underground utility detection sensors

C. Mississippi 811 is liable because the service failed to notify the water utility company of the locate request

D. The water utility company that failed to mark its line is primarily liable — the contractor fulfilled their legal obligation by calling 811 with adequate advance notice, and the utility

company's failure to respond to the locate request and mark their facility shifts the liability for the resulting damage to the nonresponsive utility

34. A contractor's project involves a commercial building where the contract requires the contractor to provide asbuilt drawings at project closeout. The contractor's superintendent has been maintaining redline markups of the construction drawings throughout the 14-month project, documenting all field changes, RFI resolutions, and change orders on the original drawing set. What is the value of this continuous documentation practice?

A. Minimal value because asbuilt drawings can be accurately prepared from memory at the end of the project without any contemporaneous redline markups

B. Significant value — continuous redline documentation throughout construction creates accurate asbuilt drawings that reflect actual conditions, including the precise locations of concealed elements (underground utilities, embedded conduit, inwall framing) that cannot be verified after the work is covered; reconstructing changes from memory months later produces incomplete and unreliable asbuilts

C. The practice is wasteful because asbuilt drawings are prepared by the architect from their inspection records, not by the contractor

D. Only moderate value because digital photography has replaced the need for redline markups on construction drawings

35. A contractor's employee is classified as nonexempt and earns \$46.00 per hour. During a workweek, the employee works 43 hours. The employer pays 43 hours at the straighttime rate ($\$46.00 \times 43 = \$1,978$). Has the employer complied with the FLSA?

A. No, because the FLSA requires overtime at 1.5 times the regular rate for hours over 40 — the correct pay is 40 hours at \$46.00 (\$1,840) plus 3 hours at \$69.00 (\$207) = \$2,047; the employer underpaid by \$69.00 (the halftime premium on 3 overtime hours at \$23.00 each)

B. Yes, because the \$46.00 rate exceeds the FLSA overtime threshold of \$35.00 per hour, making the employee exempt

C. Yes, because 43 hours is within the FLSA's 5-hour overtime buffer for construction workers during peak season

D. No, but only because the employee's total weekly pay of \$1,978 falls below the \$2,000 weekly minimum for construction workers

36. A contractor's project involves a concrete placement for a commercial foundation. The specifications require the concrete to be placed within 90 minutes of batching. A mixer truck arrives at the site 95 minutes after batching. The concrete has begun to stiffen but is still workable. The superintendent considers adding water to restore workability. What is the correct decision?

A. Add water and proceed because a 5-minute overage beyond the 90-minute limit is within standard industry tolerance

B. Add a concrete accelerator instead of water because accelerators restore workability without affecting the water-to-cement ratio

C. Reject the load — the concrete has exceeded the specification's 90-minute placement limit and has begun to stiffen; adding water (retempering) increases the water-to-cement ratio, reduces compressive strength, increases permeability, and compromises long-term durability; a replacement load delivered within the time limit should be ordered

D. Proceed with placement without adding water because the concrete is still workable despite exceeding the time limit

37. A contractor's project involves installing HVAC ductwork in a commercial building. The mechanical specifications require all ductwork joints to be sealed with approved mastic sealant. The contractor's HVAC subcontractor seals joints with duct tape instead of mastic. The architect discovers the nonconforming sealant during a site visit. What must happen?

A. The architect must accept the duct tape because both products serve the same sealing function

B. The subcontractor must remove the duct tape and reseal all joints with the specified mastic sealant — duct tape deteriorates over time and loses adhesion, especially in the temperature cycling environment of HVAC systems, while mastic provides a permanent, flexible seal that maintains ductwork integrity for the life of the system; the specification exists for long-term performance, not just initial function

C. The architect should accept the duct tape but require the subcontractor to provide a 10-year warranty on the taped joints

D. The subcontractor should apply mastic over the duct tape rather than removing it, creating a dual-seal system

38. A contractor's project involves constructing a commercial parking lot. The specifications require a minimum of 6 inches of compacted aggregate base course under the asphalt pavement.

The contractor installs only 4 inches of base to save material costs. The asphalt is placed and the parking lot appears acceptable at completion. What longterm consequence will result from this specification deviation?

A. No consequence because 4 inches of base provides adequate support for commercial parking lot traffic under all conditions

B. Only a minor cosmetic issue because the reduced base thickness may cause slight surface irregularities visible only to trained inspectors

C. Only a drainage issue because the thinner base reduces the subsurface drainage capacity by 33%

D. The reduced base thickness will likely cause premature pavement failure — the 4inch base provides 33% less structural support than the specified 6 inches, leading to accelerated cracking, rutting, and pothole formation under commercial traffic loads; the failure will manifest gradually over 25 years as the subgrade deflects under loads the inadequate base cannot distribute

39. A contractor operating as a partnership with two equal partners earns \$440,000 in net ordinary business income. Partner A also receives a \$50,000 guaranteed payment for management services. What is Partner A's total selfemployment tax base?

A. \$270,000 — Partner A's 50% distributive share (\$220,000) plus the \$50,000 guaranteed payment, because both the distributive share and guaranteed payments are subject to selfemployment tax for general partners; the SE tax base is then reduced to 92.35% ($\$270,000 \times 0.9235 = \$249,345$) before the 15.3% rate is applied

B. \$220,000 only, because guaranteed payments are classified as wages subject to payroll withholding rather than selfemployment tax

C. \$50,000 only, because a partner's distributive share is passive income exempt from selfemployment tax

D. \$440,000, because the managing partner pays selfemployment tax on the full partnership income

40. A contractor's project is governed by a contract that includes a force majeure clause covering "acts of God, fire, flood, epidemic, and other events beyond the reasonable control of the parties." A category 2 hurricane causes \$280,000 in damage to the partially completed structure and results in a 3week construction delay. Under the force majeure clause, what is the contractor typically entitled to?

A. Full reimbursement for the \$280,000 in damage plus a 3week time extension because hurricanes are specifically covered as "acts of God" under force majeure

B. Only reimbursement for the \$280,000 damage without any time extension because force majeure clauses address cost only, not schedule

C. Both the \$280,000 and the time extension because force majeure provisions always include both cost and time relief

D. Typically only a time extension — most force majeure clauses provide schedule relief but not cost recovery for delayrelated expenses; the \$280,000 in physical damage to the structure would be addressed through the builder's risk insurance policy rather than through the force majeure clause, which primarily excuses delay rather than compensating for physical damage

41. A contractor's project involves installing a commercial elevator system. After installation, the elevator passes the state inspection. The contractor provides a oneyear warranty. Eighteen months after substantial completion, the elevator experiences a mechanical failure. The owner contacts the contractor demanding repair under the warranty. Is the contractor obligated to repair the elevator?

A. Yes, because elevator systems have an automatic 3year warranty period under Mississippi building codes regardless of the contractual warranty term

B. No, because elevator repairs after warranty expiration are the owner's responsibility to arrange through an elevator maintenance contract

C. The oneyear warranty has expired, so the contractor has no warranty obligation — however, the owner may still have legal recourse under the applicable statute of limitations or statute of repose if the failure was caused by defective workmanship, and the owner should consult with legal counsel about whether a claim exists beyond the expired warranty

D. Yes, because mechanical systems are exempt from contractual warranty limitations and carry a perpetual manufacturer's warranty that the contractor must enforce

42. A contractor's CPAreviewed financial statement shows total assets of \$840,000 and total liabilities of \$620,000. The contractor wants to apply for a Mississippi commercial license with one major classification and two specialty classifications. Does the contractor meet the MSBOC financial requirements?

A. Yes — the net worth of \$220,000 ($\$840,000 - \$620,000$) exceeds both the \$50,000 minimum for the major classification and the \$20,000 minimum for each specialty

classification; MSBOC's net worth requirements are not cumulative, so the contractor only needs to meet the highest applicable threshold (\$50,000)

B. No, because the combined requirement for one major and two specialties is \$90,000 (\$50,000 + \$20,000 + \$20,000), and the contractor must demonstrate separate net worth for each

C. No, because MSBOC requires a minimum net worth of \$250,000 for any contractor seeking more than two classifications

D. Yes, but only for the two specialty classifications — the net worth of \$220,000 does not meet the \$250,000 minimum for major classifications

43. A contractor's project involves a commercial building where the specifications require all exterior concrete to be sealed with a penetrating sealer within 30 days of placement. Due to supply chain delays, the sealer is not available until Day 50. The contractor applies the sealer at Day 50. During the following winter, the concrete develops surface scaling from freezethaw cycles. What is the contractor's liability?

A. No liability because the supply chain delay was beyond the contractor's control and constitutes a force majeure event

B. The contractor is likely liable because the specification required sealing within 30 days, and the 20day delay allowed moisture to penetrate the concrete surface before sealing — the contractor should have notified the architect of the supply delay, requested direction on an alternative sealer, and taken interim protective measures rather than simply waiting 20 extra days without communication

C. No liability because freezethaw damage is classified as weatherrelated deterioration excluded from all construction warranties

D. Liability limited to the cost of the sealer application only, not the freezethaw damage, because the damage was caused by weather

44. A contractor's project involves installing a temporary stairway in a building under construction. The stairway serves as the primary means of access between the 1st and 2nd floors during construction. OSHA requires handrails on temporary stairways. The contractor installs a handrail on one side only. Does this comply with OSHA's stairway standard for construction?

A. No, because OSHA requires handrails on both sides of all construction stairways regardless of width or the number of workers using them

B. No, because construction stairways require guardrails (not handrails) on both sides, and the terms are not interchangeable

C. Yes, because OSHA requires handrails on only one side of temporary stairways used exclusively by construction workers

D. OSHA requires stairways with four or more risers or rising more than 30 inches to have at least one handrail — and stairways wider than 44 inches must have handrails on both sides; if this stairway has the required minimum and is not wider than 44 inches, a single handrail may comply, but the specific dimensions must be evaluated against the standard

45. A contractor's project involves a \$1,800,000 commercial renovation. The contractor's CGL policy has a \$1,000,000 peroccurrence limit and a \$2,000,000 aggregate. The owner requires \$5,000,000 in total liability coverage. What is the most costeffective solution?

A. Purchase five separate \$1,000,000 CGL policies from different carriers to create \$5,000,000 through stacking

B. Increase the CGL policy to a \$5,000,000 peroccurrence limit, which is the only way to meet the requirement

C. Purchase an umbrella policy with a \$4,000,000 limit above the existing \$1,000,000 CGL — creating \$5,000,000 total peroccurrence coverage at a fraction of the cost of increasing the primary CGL limit, because umbrella premiums are significantly lower per dollar of coverage than primary policy premiums

D. Reduce the project scope to below \$1,000,000 so the existing CGL limit is sufficient

46. A contractor's project involves a commercial building where the HVAC subcontractor submits shop drawings for a rooftop air handling unit. The shop drawings show the unit positioned 8 feet from the roof edge. The structural engineer's drawings show the unit positioned 15 feet from the roof edge. This discrepancy will affect the structural reinforcement required in the roof deck. What should the contractor do?

A. Submit an RFI to the architect identifying the conflict between the HVAC shop drawings and the structural drawings — the architect must coordinate with both the mechanical and structural engineers to determine the correct unit location, and the contractor should not proceed with either the structural reinforcement or the equipment installation until the conflict is resolved in writing

B. Install the unit at 8 feet from the edge per the HVAC shop drawings because the mechanical engineer designed the system and knows the optimal location

- C. Install the unit at 15 feet from the edge per the structural drawings because structural considerations always take precedence over mechanical layouts
- D. Average the two dimensions and install the unit at 11.5 feet from the edge as a compromise

47. A contractor's project has the following WIP data for three projects at yearend. Project 1: earned \$620,000, billed \$580,000. Project 2: earned \$430,000, billed \$490,000. Project 3: earned \$780,000, billed \$780,000. How are these reported on the balance sheet?

- A. All three projects are combined into a single WIP line item showing total earned revenue of \$1,830,000 and total billings of \$1,850,000
- B. Project 1 is underbilled by \$40,000 (current asset). Project 2 is overbilled by \$60,000 (current liability). Project 3 is properly billed with no balance sheet entry. The underbilling and overbilling are reported separately — never netted — because each represents a different financial condition
- C. All three projects are reported as liabilities because the combined total billings exceed combined earned revenue
- D. Only Project 2 appears on the balance sheet because it is the only project with a billing discrepancy

48. A contractor's project is nearing completion. The architect issues a certificate of substantial completion. The contractor has accumulated \$145,000 in retainage. The contract specifies retainage release within 30 days of substantial completion, conditioned on punch list completion and closeout document delivery. The contractor completes all requirements within 15 days. On Day 40, the retainage has not been released. What is the contractor's position?

- A. The contractor must wait until Day 60 because Mississippi law extends the contractual release period by an additional 30 days
- B. The contractor must send a written demand letter and wait an additional 30 days before taking any action
- C. The contractor has no recourse because retainage release is at the owner's sole discretion regardless of contractual terms
- D. The owner is in breach — all conditions for release have been met (substantial completion certified, punch list completed, closeout documents delivered), the 30day deadline has passed, and the contractor may file a lien and pursue legal action for breach of the payment obligation to recover the \$145,000

49. A contractor's project is governed by a fixed-price contract for \$2,400,000. The contractor's original estimate includes \$2,040,000 in costs and \$360,000 in profit (15% margin). The contractor achieves significant cost savings through efficient scheduling, favorable material pricing, and strong labor productivity. Actual total costs at completion are \$1,880,000. What is the contractor's actual profit and margin?

A. Actual profit is \$360,000 (15% margin) unchanged because the contract price and estimated profit are locked at bid regardless of actual cost performance

B. Actual profit is \$520,000 and actual margin is 21.7% ($\$520,000 \div \$2,400,000$) — the contractor retains the full benefit of the \$160,000 in cost savings ($\$2,040,000$ estimated – $\$1,880,000$ actual) because the owner agreed to pay \$2,400,000 regardless of actual costs; this is the fundamental advantage of fixed-price contracting for efficient contractors

C. The contractor must return \$160,000 to the owner because cost savings on fixed-price contracts belong to the project owner

D. Actual profit is \$520,000 but the contractor must place \$80,000 (half the savings) in a warranty escrow until the warranty period expires

50. A contractor has completed all 20 practice examinations in their NASCLA Mississippi study guide, scoring consistently above 80% on recent exams. The contractor is sitting in the PSI testing center waiting room before the Mississippi Law and Business Management exam. In the final minutes before the exam begins, what should the contractor focus on?

A. Frantically reviewing the table of contents of the NASCLA guide to memorize chapter locations for the last time

B. Reviewing the most complex formulas (margin vs. markup, WIP calculations, overhead rate computations) because calculation questions are the most frequently missed on the exam

C. Remaining calm, reviewing the tabbing system in the NASCLA guide one final time to ensure tabs are secure and properly labeled, confirming the calculator is functioning and permitted, taking several deep breaths, and mentally committing to the time management strategy — the knowledge is already established through months of study, and the final moments should be spent ensuring composure and readiness rather than attempting last-minute cramming

D. Attempting to memorize the answer key patterns from previous practice exams because the PSI exam follows predictable answer distribution sequences

Practice Exam 19: Answer Key and Explanations

- 1. C** — GAAP requires immediate recognition of the full anticipated loss as soon as a loss is projected. The entire \$60,000 must be recognized in the current period regardless of the 85% completion percentage. This is a fundamental accounting principle: anticipated profits are recognized proportionally based on completion, but anticipated losses are recognized in full immediately upon identification.
- 2. A** — Each specialty classification requires its own trade examination and \$100 fee. The Building Construction major classification does not include electrical or any other specialty trade. The contractor must pass the Electrical trade exam through PSI and pay the additional fee. The qualifying party must have appropriate qualifications for the added classification.
- 3. D** — Mississippi corporate income tax is 5% on taxable income exceeding \$10,000. On \$480,000: $(\$480,000 - \$10,000) \times 5\% = \$470,000 \times 5\% = \$23,500$. The first \$10,000 of corporate income is not subject to the 5% rate. This threshold is a commonly tested detail — the tax applies only to income above \$10,000, not to the full amount.
- 4. B** — Type C soil requires a 1½:1 slope — for every 1 foot of depth, the slope extends 1.5 feet horizontally. For the 6-foot sloped upper section: $6 \times 1.5 = 9$ feet of horizontal run on each side. The trench shield protects the lower 10 feet, and the sloped upper section with 9-foot setbacks prevents the unshielded soil from collapsing into the trench.
- 5. C** — Actual labor costs of \$315,000 at 65% completion exceed the prorated budget of \$273,000 by \$42,000 — a 15.4% overrun. If this rate continues, total labor costs will reach approximately \$484,600 versus the \$420,000 budget. The \$42,000 midproject variance is a serious warning requiring immediate investigation into the cause — productivity losses, overtime, crew size changes, or scope creep.
- 6. A** — Although the nearmiss does not require OSHA 300 Log recording (no injury occurred), it reveals two active OSHA violations: an unprotected roof edge at 26 feet (fall protection violation) and a tripping hazard from the coiled cord. The employer must correct both hazards immediately. Nearmisses are critical safety indicators that should trigger investigation and corrective action.
- 7. B** — The sand and gravel layer constitutes a Type I differing site condition — actual subsurface conditions differ materially from those indicated in the geotechnical report. The report showed uniform clay to 25 feet; the contractor encountered loose sand and gravel at 12 feet. The contractor is entitled to additional compensation (\$68,000) and a time extension (2 weeks) under the differing site conditions clause.
- 8. D** — The \$175,000 in distributions avoids the 15.3% SE tax under the S corp structure. Approximate savings: $\$175,000 \times 92.35\% \times 15.3\% \approx \$24,700$. As a sole proprietor, the full \$310,000 would be subject to SE tax. With the S corp election, only the \$135,000 salary is subject to payroll taxes — the distribution passes through as ordinary income without the SE tax burden.
- 9. C** — Supplementary conditions rank higher than general conditions in the precedence hierarchy. The 5-day notice period governs. A contractor who submits a claim notice on Day 8

— within the general conditions' 14day period but beyond the supplementary conditions' 5day period — has missed the governing deadline and may waive their claim rights entirely. The shorter deadline controls.

10. A — Gaspowered generators produce carbon monoxide — a colorless, odorless gas that migrates through building penetrations to occupied areas. Headaches and exhaust smell are classic symptoms of CO exposure. The contractor must shut down the generator immediately, ventilate all affected areas, evacuate symptomatic workers for medical evaluation, and relocate the generator outdoors or provide adequate ventilation with continuous CO monitoring.

11. B — Gross profit: $\$4,400,000 - \$3,520,000 = \$880,000$ (20% margin). Net profit: $\$880,000 - \$572,000 = \$308,000$ (7% margin). Both margins are expressed as percentages of revenue. The 13point spread between gross (20%) and net (7%) demonstrates how G&A expenses consume nearly twothirds of the gross profit earned on construction operations.

12. D — A competent person must inspect the scaffold before each work shift and after any event that could affect structural integrity — storms, equipment impact, modifications, or extended periods of nonuse. The competent person must have knowledge to identify hazards and authority to take corrective action. This ongoing inspection obligation exists throughout the scaffold's service life, not just at initial installation.

13. C — Completion: $\$1,160,250 \div \$1,657,500 = 70\%$. Earned revenue: $70\% \times \$1,950,000 = \$1,365,000$. Billings: $\$1,250,000$. Since earned revenue ($\$1,365,000$) exceeds billings ($\$1,250,000$) by $\$115,000$, the project is underbilled. The $\$115,000$ appears as a current asset — the contractor has performed $\$115,000$ more work than has been invoiced.

14. B — Liens cannot be filed against publicly owned property. The payment bond serves as the substitute remedy on public projects — it guarantees payment to subcontractors, suppliers, and laborers. The performance bond guarantees project completion for the owner's benefit, not subcontractor payment. The subcontractor's $\$95,000$ claim is filed against the payment bond.

15. D — Total hours: $11+10+9+11+10+4 = 55$. Regular: $40 \times \$44.00 = \$1,760$. Overtime: $15 \times \$66.00$ ($1.5 \times \$44.00$) = $\$990$. Total: $\$2,750$. The FLSA requires overtime on all hours over 40 in the workweek. There is no daily overtime trigger, no Saturday premium, and no exemption based on working fewer than 8 hours on any particular day.

16. C — The structural engineer specified #5 rebar at 12 inches on center for specific load requirements. Substituting #4 rebar at 16 inches reduces both the bar size and increases the spacing, significantly diminishing the wall's reinforcement capacity. Since the concrete has not been poured, the incorrect rebar must be removed and replaced with the specified reinforcement before the pour proceeds.

17. A — Costs plus fee: $\$2,890,000 + \$250,000 = \$3,140,000$. Savings: $\$3,400,000 - \$3,140,000 = \$260,000$. Owner's 60%: $\$156,000$ credit. Contractor's 40%: $\$104,000$ bonus. Owner pays: $\$3,140,000 + \$104,000 = \$3,244,000$. Equivalently: $\$3,400,000 - \$156,000 = \$3,244,000$.

18. D — Excavating 14 feet below an existing foundation removes the soil providing lateral support, creating risk of undermining, settlement, or collapse. A structural engineer must design underpinning, shoring, or other support systems before excavation proceeds below the

adjacent foundation level. This is one of the highest-risk construction operations — failure can cause catastrophic damage to the adjacent building and endanger its occupants.

19. B — Liquidated damages: $20 \times \$2,200 = \$44,000$. The mutual waiver bars the \$85,000 lost rental income because it is a consequential damage. The liquidated damages clause provides the exclusive delay remedy at the preagreed daily rate. The owner recovers \$44,000, not \$129,000. The waiver protects both parties from open-ended consequential damage claims.

20. C — In real-world fire conditions, smoke concentration builds gradually — especially in large open spaces. Less sensitive detectors require more smoke accumulation before triggering, delaying the alarm. This delay allows the fire to grow larger, produce more toxic gases, and reduce the available evacuation time. The functional test using concentrated smoke at the detector does not replicate actual fire development conditions.

21. A — The architect has the authority to reject unauthorized material substitutions. Structural adhesives are critical components — using an unapproved product without formal submittal and written approval violates the contract. The subcontractor must remove the nonconforming adhesive and reinstall with the specified product. All substitutions require formal approval through the contractual submittal process before installation.

22. B — Projected total cost: $\$1,088,000 + \$370,000 = \$1,458,000$. Original estimate: \$1,360,000. Overrun: \$98,000. Projected profit: $\$1,600,000 - \$1,458,000 = \$142,000$, down from \$240,000 — a \$98,000 (41%) profit erosion. The 75% checkpoint shows \$68,000 in overrun (\$1,088,000 vs. \$1,020,000 budget), and the remaining 25% is projected \$30,000 over budget.

23. D — A loaded dump truck within 3 feet of the trench edge creates surcharge loading — the heavy vehicle's weight exerts lateral pressure on the trench walls that can exceed the soil's resistance and trigger a cave-in. The competent person must require the truck to be moved to a safe distance. Heavy equipment parked near trench edges is one of the most common contributing factors to excavation collapses.

24. C — A listed firestop system rated for the same fire-resistance period as the wall (2 hours) must be installed at every penetration point. The firestop must be a tested and listed assembly — not improvised with insulation, caulk, or tape. An unprotected penetration creates an opening through which fire and smoke spread, defeating the wall's fire-resistance rating and endangering building occupants.

25. A — The 10-day deadline means payment was due by May 11. Sub A (May 8, Day 7): timely ✓. Sub B (May 15, Day 14): 3 days late ✗. Sub C (May 20, Day 19): 9 days late ✗. Pay-when-paid clauses create enforceable timelines, and each subcontractor payment is evaluated independently against the contractual deadline.

26. B — OSHA requires columns to be stabilized before workers leave the site. Leaving erected columns without temporary guying or bracing over a weekend exposes them to predictable wind forces. The windstorm was foreseeable — columns must be stabilized at the end of each work period, not left unsecured. The erection plan should require temporary stabilization before the crew departs.

27. A — Profit: $\$1,200,000 - \$1,020,000 = \$180,000$. Margin: $\$180,000 \div \$1,200,000 = 15\%$ (profit as percentage of selling price). Markup: $\$180,000 \div \$1,020,000 = 17.65\%$ (profit as percentage of cost). Markup is always higher than the equivalent margin because it uses the smaller denominator. This relationship is consistent and predictable.

28. C — Fire suppression water density is a lifesafety specification. Delivering 0.17 GPM/SF instead of the required 0.20 GPM/SF means the system may not control or suppress a fire within the design area. The subcontractor must identify the deficiency — undersized piping, insufficient water supply, incorrect heads, or hydraulic calculation errors — and bring the system to specification before acceptance.

29. B — The hospitalization triggers OSHA's 24-hour reporting requirement. The unprotected floor opening is a fall protection violation — OSHA requires all floor openings to be guarded by covers or guardrails. The complete absence of any protection demonstrates serious noncompliance that will likely result in a significant citation with substantial penalties.

30. D — Reducing retainage from 10% to 5% on remaining billings directly improves cash flow. On a \$200,000 monthly billing, the contractor receives \$190,000 (5% withheld) instead of \$180,000 (10% withheld) — an additional \$10,000 per month. During the final construction phase when the contractor is paying for punch list work and closeout activities, this improved cash flow is particularly valuable.

31. C — Ceiling tiles, plaster (including joint compound), and vinyl floor tiles manufactured before the 1980s all commonly contained asbestos. All three materials should be presumed to contain asbestos until testing proves otherwise. OSHA's standard applies to materials containing more than 1% asbestos. Testing before disturbance protects workers from the serious health hazards of asbestos fiber inhalation.

32. A — The 4% overhead difference $(19\% - 15\%) \times \$880,000 = \$35,200$ in unrecovered overhead. The project carries \$35,200 less overhead allocation than the company actually needs to cover its operating expenses. This \$35,200 shortfall comes directly from the project's profit. Recalculating the overhead rate annually with actual costs is essential to avoid systematic underrecovery.

33. D — The contractor fulfilled their legal obligation by calling 811 with two working days' advance notice. The water utility company failed to respond to the locate request and mark their facility. The utility company's failure shifts the liability for the resulting damage to the nonresponsive utility. The 811 system depends on utility companies responding to locate requests — when they fail to respond, they bear the consequences.

34. B — Continuous redline documentation creates accurate asbuilt drawings that reflect actual conditions — including concealed elements (underground utilities, embedded conduit, inwall framing) that cannot be verified after construction covers them. Reconstructing changes from memory months later produces incomplete, unreliable asbuilts. Accurate asbuilts are essential for future maintenance, renovation, and emergency response.

35. A — Total hours: 43. Regular: $40 \times \$46.00 = \$1,840$. Overtime: $3 \times \$69.00$ ($\$46.00 \times 1.5$) = \$207. Correct total: \$2,047. The employer paid \$1,978 ($43 \times \46.00), underpaying by \$69.00 — the halftime premium on 3 overtime hours. The FLSA requires overtime at 1.5× for all hours over 40, regardless of the hourly rate.

36. C — The concrete exceeded the 90minute limit and has begun to stiffen. Adding water increases the watertocement ratio, reducing strength, increasing permeability, and compromising durability. The superintendent must reject the load and order a replacement delivered within the specification's time limit. The 90minute window exists because concrete quality degrades with extended mixing and transport time.

37. B — Duct tape deteriorates over time — it loses adhesion in the temperature cycling environment of HVAC systems, eventually separating from ductwork joints and allowing air leakage. Mastic sealant provides a permanent, flexible seal that maintains integrity for the life of the system. The specification requires mastic for longterm performance, and the subcontractor must comply regardless of their preference.

38. D — The 4inch base provides 33% less structural support than the specified 6 inches. Under commercial traffic loads, the inadequate base cannot properly distribute loads to the subgrade, causing accelerated deflection, cracking, rutting, and pothole formation. The failure manifests gradually over 25 years as cumulative load repetitions exceed the reduced base's capacity.

39. A — Partner A's SE tax base: $\$220,000$ distributive share ($50\% \times \$440,000$) + $\$50,000$ guaranteed payment = $\$270,000$. The SE base is then adjusted: $\$270,000 \times 92.35\% = \$249,345$. The 15.3% SE tax rate applies to this adjusted amount. For general partners, both distributive shares and guaranteed payments are subject to selfemployment tax.

40. D — Most force majeure clauses provide schedule relief (time extension) but not cost recovery for delayrelated expenses. The physical damage ($\$280,000$) is typically addressed through builder's risk insurance — not the force majeure clause. Force majeure primarily excuses the contractor from liquidated damages during the delay period and extends the completion date by the duration of the disruption.

41. C — The oneyear warranty has expired, so the contractor has no warranty obligation for the mechanical failure at 18 months. However, the owner may have legal recourse under the applicable statute of limitations or statute of repose if the failure was caused by defective workmanship during installation. Warranty expiration does not automatically extinguish all legal exposure — statutory time limits may extend beyond the contractual warranty.

42. A — Net worth: $\$840,000 - \$620,000 = \$220,000$. This exceeds both the $\$50,000$ minimum for the major classification and the $\$20,000$ minimum for each specialty. MSBOC requirements are not cumulative — the contractor needs $\$50,000$ (the highest threshold), not $\$90,000$ ($\$50,000 + \$20,000 + \$20,000$). The $\$220,000$ net worth provides substantial margin above all applicable thresholds.

43. B — The specification required sealing within 30 days. The contractor waited until Day 50 without notifying the architect or requesting direction on alternatives. The 20day delay allowed moisture to penetrate the concrete surface before sealing, contributing to freezethaw damage. The contractor should have communicated the delay and sought interim protective measures rather than silently exceeding the specification timeline.

44. D — OSHA requires stairways with four or more risers or rising more than 30 inches to have at least one handrail. Stairways wider than 44 inches require handrails on both sides. Whether one handrail is sufficient depends on the stairway's specific dimensions — width is

the determining factor. The contractor must verify the stairway's width against the standard before concluding that a single handrail complies.

45. C — An umbrella policy with a \$4,000,000 limit above the \$1,000,000 CGL creates \$5,000,000 total peroccurrence coverage. Umbrella premiums are significantly lower per dollar of coverage than primary policy premiums because the umbrella responds only after the underlying policy is exhausted. This is the most costeffective way to achieve high total liability limits without the expense of increasing the primary CGL.

46. A — The 7foot discrepancy between the HVAC shop drawings and structural drawings affects both the mechanical system layout and the structural reinforcement design. The contractor must submit an RFI to the architect for coordination between the mechanical and structural engineers. Neither the contractor nor either subcontractor should proceed until the design team resolves the conflict in writing.

47. B — Project 1: underbilled \$40,000 (current asset). Project 2: overbilled \$60,000 (current liability). Project 3: properly billed (no balance sheet entry). The underbilling and overbilling are reported separately — never netted. Each represents a different financial condition, and combining them would obscure the contractor's actual billing position for stakeholders reviewing the financial statements.

48. D — All conditions for retainage release have been met: substantial completion certified, punch list completed within 15 days, closeout documents delivered. The 30day deadline has passed by 10 days. The owner is in breach of the payment obligation. The contractor may file a lien and pursue legal action to recover the \$145,000 in earned retainage.

49. B — Actual profit: $\$2,400,000 - \$1,880,000 = \$520,000$. Actual margin: $\$520,000 \div \$2,400,000 = 21.7\%$. The contractor retains the full \$160,000 in cost savings because the owner agreed to pay \$2,400,000 regardless of actual costs. This is the fundamental advantage of fixedprice contracting for efficient contractors — every dollar saved below the estimate goes directly to the contractor's bottom line.

50. C — In the final moments before the exam, the knowledge is established. Cramming, formula review, or answer pattern memorization will not improve performance and may increase anxiety. The contractor should ensure composure, verify the NASCLA guide tabs are secure, confirm the calculator works, take deep breaths, and commit to the time management strategy. Calm, organized readiness maximizes the benefit of months of preparation.