PRACTICE EXAM 13 — NASCLA MARYLAND — QUESTIONS 1–55

Instructions: 55 questions total. Recommended time limit: 150 minutes. Passing threshold: 70% (39 of 55 correct). Open book — the NASCLA Maryland reference may be consulted.

1. OSHA requires that a non-self-supporting (extension or single) portable ladder be set at an angle so that the horizontal distance from the top support to the foot of the ladder is approximately:

A. One-half of the working length of the ladder along the side rails

B. One-quarter of the working length of the ladder, the standard 4:1 angle

C. One-tenth of the working length of the ladder along the side rails

D. Equal to the working length of the ladder along the side rails for stability

2. A "Type IA" portable ladder rating under ANSI standards corresponds to:

A. Extra heavy-duty industrial duty with a load capacity of 300 pounds

B. Heavy-duty industrial duty with a load capacity of 200 pounds

C. Medium-duty commercial use with a load capacity of 150 pounds

D. Light-duty household use with a load capacity of 100 pounds

3. A job-built wooden ladder used at a Maryland construction site must generally:

A. Be no longer than four feet from the bottom rung to the top rung at any time

B. Be inspected only after a worker falls from it during use on the site

C. Be made only of pressure-treated wood with creosote-based preservative finish

D. Meet ANSI A14.4 or 29 CFR 1926.1053 design requirements for job-built ladders

4. A worker using a stepladder must generally not:

A. Hold the side rails with both hands while ascending or descending the ladder

B. Use the bucket shelf on the ladder for holding tools during regular work tasks

C. Stand on the top step or top cap of the stepladder unless designed for it

D. Inspect the ladder for damaged rungs and side rails before each use today

5. An employee working from a boom-supported aerial lift (cherry-picker style) must:

A. Position the platform within twelve inches of an exterior building wall at all times

B. Wear a personal fall arrest or restraint system anchored to the manufacturer-designated point

C. Disable the lift's outriggers to allow easier movement around the construction site

D. Climb to the top guardrail to reach overhead work that is beyond standing arm-length

6. Scissor lifts (vertical-mast lifts) under OSHA standards generally require:

A. Tie-off to an external building structure regardless of the lift's design or features

B. A second operator on the ground at all times to control the lift's motion and platform

C. A separate fire watch posted at the lift base whenever the lift is being used on a project

D. Standard guardrail systems on the platform meeting OSHA requirements for height and strength

7. Under OSHA 29 CFR 1910.178, a powered industrial truck (forklift) operator must:

A. Be trained, evaluated, and certified by the employer before any independent operation begins

B. Hold a Maryland Class A commercial driver's license issued by the MVA before operation

C. Be at least twenty-one years of age and have ten years of experience as a heavy equipment operator

D. Pass an annual physical examination by an occupational physician specializing in industrial medicine

8. Refresher forklift operator training and evaluation under OSHA is generally required:

A. Only when the operator changes employers and begins work with a new company

B. Annually on the anniversary of the operator's initial date of training and certification

C. At least every three years, and whenever the operator is involved in an accident or near-miss

D. Every five years from the date the operator first received initial forklift operator training

9. A powder-actuated tool used at a construction site to fasten material to concrete or steel must be operated:

A. By any worker on the site without any prior training or familiarization at all

B. By an employee trained on that specific tool, with the manufacturer's instructions on hand

C. Only between the hours of seven A.M. and noon to avoid disturbing area residents

D. Without any personal protective equipment, since the tool eliminates impact hazards

10. Portable circular saws used on residential construction sites must be equipped with:

A. An upper guard covering the upper portion of the blade and a movable lower guard

B. Only a fixed half-blade guard on the right side, with no movable lower guard required

C. No guard at all, provided the saw is operated only by a master carpenter with experience

D. A laser sight only, since the laser substitutes for the requirement of a blade guard

11. Under OSHA 29 CFR 1910.215, a bench grinder must be equipped with a work rest set as close as practical to the wheel, with a maximum clearance of:

A. Three-quarters of an inch between the work rest and the wheel face

B. One-half of an inch between the work rest and the wheel face

C. One-eighth of an inch between the work rest and the wheel face

D. One full inch between the work rest and the wheel face

12. A pneumatic tool's air supply hose connections on a construction site must generally:

A. Be tied together with electrical tape to keep them from separating at the coupling

B. Be left uncoupled when not in use to release any residual air pressure in the line

C. Be connected only when the tool is being used and disconnected the rest of the day

D. Be secured with a positive means (e.g., whip check) to prevent the hose from whipping if it separates

13. A worker operating a chainsaw on a residential job site should generally wear:

A. Lightweight shorts to keep cool, with sandals to allow air flow around the feet

B. Chainsaw chaps, eye and face protection, hard hat with hearing protection, and gloves

C. A long flowing scarf around the neck to filter sawdust from the breathing air

D. A cloth bandana over the eyes to block dust generated during cutting operations

14. Oxygen and fuel-gas cylinders (such as acetylene) stored at a construction site must be:

A. Separated by at least twenty feet, or by a fire-resistant barrier at least five feet high

B. Stored together in the same vented cabinet to save space at the contractor's site yard

C. Stored on their sides at the lowest convenient point in the contractor's storage trailer

D. Connected directly to each other with a common manifold before being moved to the site

15. Under OSHA 29 CFR 1910.106, the maximum quantity of Class I, II, or III flammable and combustible liquids that may be stored in a single approved storage cabinet is:

A. Fifteen gallons of any combustible regardless of the storage cabinet design or its ratings

B. Twenty-five gallons regardless of the storage cabinet design or ratings, including all classes

C. Forty-five gallons regardless of the storage cabinet design or its ratings, including all classes

D. Sixty gallons of Class I or II liquids, with not more than 120 gallons of Class III combustibles

16. Under NFPA 30, a "Class IA" flammable liquid is one having a flash point below 73 °F and a boiling point below:

A. Two hundred degrees Fahrenheit at standard atmospheric pressure conditions

B. One hundred fifty degrees Fahrenheit at standard atmospheric pressure conditions

C. One hundred degrees Fahrenheit at standard atmospheric pressure conditions

D. Three hundred degrees Fahrenheit at standard atmospheric pressure conditions

17. OSHA 29 CFR 1926.51 requires that potable drinking water be:

A. Provided in adequate quantity at all construction sites for all employee use

B. Provided only when the outside ambient temperature exceeds ninety degrees Fahrenheit

C. Purchased only from vendors approved by the Maryland Department of Health

D. Sold to employees at the contractor's cost from a central worksite vending machine

18. OSHA construction sanitation standards require the employer to provide toilet facilities according to:

A. One toilet seat per twenty employees regardless of the number of workers on the site

B. A graduated schedule based on the number of employees, generally one toilet per 20 workers for larger crews

C. One toilet seat for every five hundred employees, regardless of the actual number working

D. Only outdoor latrines dug at least one foot deep for any construction site of any size

19. OSHA construction standards require that:

A. The general contractor's chief executive personally attend to all first aid needs on the site

B. All worker injuries be sent immediately to the nearest emergency room regardless of severity

C. No first aid be provided at the work site for any injury, since EMS will always respond

D. First-aid supplies be available and a person trained in first aid be available when an infirmary or clinic is not in proximity

20. Under OSHA 29 CFR 1910.38, an Emergency Action Plan (EAP) for a covered employer with 11 or more employees must:

A. Be in writing, kept in the workplace, and made available to employees for review

B. Be communicated only to senior managers and never shared with general employees

C. Be reviewed only after a workplace fatality has occurred at the contractor's site

D. Be approved by the local fire chief before any work begins on the construction site

21. A workplace Fire Prevention Plan under OSHA 29 CFR 1910.39 must, at a minimum, address:

A. The contractor's quarterly federal income tax obligations under Internal Revenue Code §6201

B. The contractor's preferred branding of the safety signage used on multiple project sites

C. Major fire hazards, handling and storage of combustibles, ignition controls, and procedures for hazardous waste

D. The owner's preferred color palette for the building exterior at the project completion

22. Under OSHA 29 CFR 1926.502, a standard guardrail system on a construction site must have a top rail height of approximately:

A. Twenty-four inches above the working surface, plus or minus one inch as installed

B. Forty-two inches above the working surface, plus or minus three inches as installed

C. Fifty-four inches above the working surface, plus or minus one inch as installed

D. Sixty inches above the working surface, plus or minus three inches as installed

23. OSHA guardrail systems generally require, in addition to a top rail at the proper height:

A. Plywood blocking around the entire perimeter of the platform every two linear feet

B. Metal-mesh netting fully enclosing the top opening of the platform along the protected edge

C. Continuous orange spray paint markings on the deck within twelve inches of the edge

D. A mid-rail (or equivalent) at the midpoint, and a toe board where materials could fall

24. Under OSHA 1926.502(d)(15), an anchorage used for personal fall arrest must be capable of supporting:

A. At least 5,000 pounds per worker attached, or be part of an engineered system with a 2:1 safety factor

B. Three hundred pounds per worker attached to the anchorage point on the structure

C. One thousand pounds per worker attached to the anchorage point on the structure

D. Two thousand five hundred pounds per worker attached to the anchorage on the structure

25. Under OSHA 1926.502, a personal fall arrest system (PFAS) must be rigged so that the worker:

A. Free-falls no more than three feet before the lanyard begins to decelerate the worker

B. Cannot free fall more than six feet, nor contact any lower level during deceleration

C. Free-falls a maximum of fifteen feet before deceleration occurs after activation

D. Free-falls no more than twenty feet before deceleration occurs after activation

26. A self-retracting lifeline (SRL) is a fall arrest device that:

A. Allows up to fifty feet of free fall before locking and decelerating the falling worker

B. Connects two workers to each other rather than to an independent anchor point at all

C. Locks rapidly when subjected to acceleration, limiting free fall typically to two feet or less

D. Is used only when no other anchorage is available within fifty feet of the worker

27. A warning line system used as an alternative to PFAS on a low-slope roof:

A. Must be erected at least six feet from the roof edge and meet specified flag, height, and strength criteria

B. Consists only of caution tape stretched across the work area at chest height of an average worker

C. May be installed at any distance from the roof edge selected by the foreman on the day of work

D. Replaces the requirement for any guardrail, PFAS, or safety net system on every roof project

28. A "controlled access zone" (CAZ) used during leading-edge or overhand bricklaying work is generally:

A. Marked with a temporary chain-link fence at least six feet high around the entire perimeter of the work

B. Open to all personnel on the site as a designated rest area during break times throughout the day

C. Marked only with orange spray paint dots on the floor every twelve inches around the work area

D. Defined by control lines marking the boundary, with entry limited to authorized employees performing the work

29. A safety monitoring system used as fall protection on a low-slope roof under OSHA requires:

A. The monitor to also perform fall arrest rescue using a personal fall arrest system attached to the worker

B. A competent person whose only job is to recognize and warn workers of fall hazards as they work

C. The monitor to be located in a tower at least twenty feet above the working surface for visibility

D. The monitor to physically restrain any worker who comes within ten feet of an exposed leading edge

30. Under OSHA 1926.500, a "low-slope" roof is defined as one having a slope of:

A. Six units vertical in twelve units horizontal (6:12) or steeper for any roofing material

B. Eight units vertical in twelve units horizontal (8:12) or steeper for any roofing material

C. Four units vertical in twelve units horizontal (4:12) or less in vertical rise to horizontal run

D. Twelve units vertical in twelve units horizontal (12:12) or steeper in vertical rise to horizontal run

31. A mobile (rolling) scaffold under OSHA Subpart L must generally have a height-to-minimum-base ratio not exceeding:

A. Four to one (4:1) unless the scaffold is restrained against tipping by outriggers or guys

B. Ten to one (10:1) regardless of any other stability criteria provided by the manufacturer

C. Twenty to one (20:1) regardless of any other stability criteria provided by the manufacturer

D. There is no maximum ratio under any provision of OSHA's mobile scaffold standard

32. A two-point suspended scaffold (swing stage) used for window washing or facade work must be:

A. Used only between the hours of nine A.M. and three P.M. on weekdays

B. Limited to two workers per platform regardless of platform length or other criteria

C. Designed to allow workers to climb up the suspension ropes hand over hand to the roof

D. Suspended by ropes or wire ropes supported by overhead supports meeting OSHA strength criteria, with workers tied off independently

33. Under OSHA's Lockout/Tagout standard at 29 CFR 1910.147, an "authorized employee" is one who:

A. Has been employed by the company for at least five continuous years without interruption

B. Locks or tags out machines or equipment in order to perform service or maintenance on it

C. Operates the machine but has no role in any lockout or tagout activities at the worksite

D. Holds a state-issued electrician or mechanic license recognized by the federal government

34. An employer's LOTO program must be inspected at least:

A. Daily by a competent person before any service work begins on covered equipment

B. Weekly by the safety director with copies of the inspection report sent to the fire chief

C. Annually by an authorized employee not involved in the LOTO procedure being inspected

D. Every five years by an outside third-party auditor accredited by the federal government

35. Before service or maintenance work begins on an energy-isolated machine, the authorized employee must verify isolation by:

A. Taking the manufacturer's representative's word that all energy has been isolated for the work

B. Allowing the affected employees to operate the machine briefly to confirm that it stops moving

C. Locking the machine in its OFF position with a sign reading "Do Not Operate" without further testing

D. Attempting to operate the machine controls and otherwise testing to confirm that it cannot start

36. Effective construction site security measures generally include:

A. Perimeter fencing, controlled access points, signage, lighting, and material storage controls

B. A single padlock placed on the main gate at the end of each workday without any other measures

C. Permanent posting of a federal U.S. Marshal at the site entrance during construction hours

D. A signed pledge from each worker that they will not steal from the site over the project duration

37. OSHA construction lighting requirements at 29 CFR 1926.56 generally call for general construction area illumination of at least:

A. One foot-candle at the working surface of every construction site at all times of day

B. Five foot-candles in general construction area illumination, with higher levels in specific areas

C. Twenty-five foot-candles in general construction area illumination, regardless of the task type

D. One hundred foot-candles in general construction area illumination, regardless of the task type

38. When heavy equipment such as an excavator or crane is operating on a construction site, the swing radius of the rotating superstructure should be:

A. Marked only with orange paint on the ground every twelve inches around the equipment

B. Left completely unmarked to allow workers to walk freely around the equipment as needed

C. Barricaded or otherwise controlled to prevent workers from being struck by the swinging counterweight

D. Used as the primary walking surface for workers traveling between adjacent construction areas

39. Backing of heavy construction vehicles with restricted rear view should generally be controlled by:

A. The driver alone using the side mirrors and electronic sensors built into the vehicle
B. Sounding the vehicle's horn three times before beginning the backing motion at any time
C. Avoiding any backing motion by always backing the truck into the parking position at start of day
D. A trained spotter using established hand signals, plus an operating backup alarm on the vehicle

40. Under OSHA 1926.651(c), an excavation or trench four feet or more in depth requires:

A. A stairway, ladder, ramp, or other safe means of egress located within 25 feet of all workers
B. Only a verbal warning to workers to climb out of the trench using the dirt sidewalls if needed
C. A continuous safety net stretched horizontally above the worker at all times during the work
D. A medical professional standing at the edge of the trench during the entire duration of the work

41. A "competent person" under OSHA's excavation standards is one who is capable of:

A. Operating any heavy equipment at a construction site regardless of certification or training
B. Performing only first aid and CPR for workers injured during trench collapses on the project
C. Identifying existing and predictable hazards and authorized to take prompt corrective action
D. Designing the trench protective system using engineering software in the contractor's office

42. OSHA classifies excavation soil into Type A, Type B, and Type C based on:

A. The color of the soil observed under bright sunlight at the surface of the cut by an inspector
B. Cohesion, granularity, and stability characteristics, with Type A the most stable and Type C the least
C. The county of Maryland in which the excavation work is being performed by the contractor

D. The market value of the soil per cubic yard if sold to a local sand and gravel supplier

43. "Stable rock" excavation under OSHA's appendix may generally:

A. Have vertical sides without sloping or shoring, provided the rock remains intact while exposed

B. Be excavated with sides sloped no steeper than one to one (1:1) horizontal to vertical

C. Be left open without any protective system regardless of the soil classification of the rock

D. Be excavated only with a fully engineered protective system designed by a licensed engineer

44. When water accumulates in an excavation, OSHA requires that the contractor:

A. Allow the water to evaporate naturally over the next forty-eight hours without doing anything

B. Pump the water to the nearest storm drain without any treatment before discharge to the sewer

C. Send all workers home for the remainder of the day until the water disappears naturally

D. Not allow employees to work in the excavation unless adequate precautions are taken to protect them

45. Construction industry hard hat color coding (an industry convention, not an OSHA mandate) typically uses:

A. Pink hard hats for new hires regardless of trade or experience level on construction sites

B. White for managers/engineers, yellow for laborers, blue for electricians, green for safety officers

C. Red for the homeowner whenever the homeowner is visiting the construction site for any reason

D. Purple for the architect of record regardless of trade, role, or location on a project site

46. ANSI/ISEA 107 classifies high-visibility safety apparel into performance classes based on:

A. The number of pockets sewn into the garment for tool storage during work activities

B. The retail price paid by the contractor for each garment purchased for an employee

C. The amount of background and retroreflective material on the garment, for the wearer's visibility

D. The color of the worker's hard hat that the high-visibility vest is paired with at the site

47. A worker performing "safety-sensitive" functions covered by the Department of Transportation's drug and alcohol testing regulations is generally subject to:

A. No federal drug or alcohol testing requirements under any circumstance during employment

B. Only post-accident drug and alcohol testing if the worker had been in an injury accident

C. Pre-employment, random, post-accident, reasonable-suspicion, and return-to-duty testing under DOT rules

D. Annual drug and alcohol testing performed only at a state-licensed laboratory in the worker's state

48. Under FMCSA Hours of Service rules for property-carrying CMV drivers, the basic driving limit is generally:

A. Six hours of driving in a thirteen-hour duty period, with no other applicable rest requirements

B. Eight hours of driving in a twelve-hour duty period, with no other applicable rest requirements

C. Ten hours of driving in a fifteen-hour duty period, with no other applicable rest requirements

D. Eleven hours of driving following ten consecutive hours off duty, within a 14-hour duty window

49. A federally required driver vehicle inspection report (DVIR) prepared at the end of each duty period for a commercial motor vehicle generally must cover:

A. Only the engine oil level of the truck as observed by the driver during the inspection

B. Service brakes, parking brake, steering, lights, reflectors, tires, horn, wipers, mirrors, and emergency equipment

C. Only the truck's exterior paint condition as observed by the driver during the day's drives

D. Only the truck's radio and infotainment system functioning during the day's drives

50. A contractor that ships hazardous materials in interstate commerce in Maryland must comply with:

A. U.S. DOT Hazardous Materials Regulations under 49 CFR (HM 181 and related parts)

B. Only the Maryland Department of the Environment regulations on hazardous waste storage

C. Only the federal Toxic Substances Control Act regardless of the type of hazardous material

D. Only EPA RCRA hazardous waste regulations covering disposal of finished hazardous material

51. In Maryland, the agency that administers occupational licensing for many trades (including HVACR, plumbing, electrical, and home improvement) is generally:

A. The Maryland Office of the Comptroller through its license division in Annapolis directly

B. The Maryland Public Service Commission through its utility licensing division in Baltimore

C. The Maryland Department of the Environment through its industrial licensing division statewide

D. The Maryland Department of Labor, which houses the relevant boards and the Maryland Home Improvement Commission

52. Maryland's registered apprenticeship system is administered through:

A. The Maryland State Board of Education's vocational program office in every Maryland county

B. The Maryland Public Service Commission's training division for utility workers exclusively

C. The Maryland Apprenticeship and Training Council (MATC) within the Maryland Department of Labor

D. The Maryland Office of the Attorney General's labor practices division in Annapolis directly

53. Maryland surety bonds posted by an MHIC contractor as financial security to the Commission are generally:

A. Filed with the U.S. Department of the Treasury's bond division in Washington, D.C.

B. Issued by a surety company authorized to write surety in Maryland and filed with the MHIC

C. Issued only by the contractor's personal homeowners' insurance carrier in Maryland directly

D. Maintained in cash form in a vault operated by the Maryland Office of the Comptroller

54. The Maryland Workers' Compensation Commission handles disputed claims by:

A. Investigating the claim, holding a hearing before a commissioner, and issuing a written decision

B. Referring all disputes directly to a Maryland circuit court for trial without any hearing

C. Submitting the dispute to non-binding mediation only, with no enforcement authority

D. Assigning the case to a federal administrative law judge in Washington, D.C.

55. Maryland's veterans' hiring preference statute (where applicable) generally provides that:

A. Veterans must be the only candidates considered for any Maryland state contracting work

B. Any veteran applicant must be paid double the prevailing wage on every state contract job

C. Veterans receive a lifetime tax credit equal to half of the contract's gross labor cost amount

D. Eligible veterans receive an added preference (often by added points or priority) in qualifying state hiring decisions

PRACTICE EXAM 13 — NASCLA MARYLAND — EXPLAINED ANSWER KEY

1. B — A non-self-supporting portable ladder is set so that the horizontal distance from the base to the support equals about one-fourth of the working length — the standard 4:1 angle, or about 75° from horizontal. The geometry keeps the ladder stable against tipping and minimizes the chance of the foot kicking out under load.

2. A — Under ANSI A14, a Type IA portable ladder is rated for extra heavy-duty industrial use with a maximum load capacity of 300 pounds. The duty rating considers the combined weight of the climber, tools, and materials being carried up the ladder.

3. D — A job-built wooden ladder used on a construction site must meet the design and construction requirements of ANSI A14.4 or the equivalent provisions of 29 CFR 1926.1053. The standards specify rung spacing, side-rail sizing, and assembly so that a field-built ladder performs like a manufactured one.

4. C — A worker on a stepladder must not stand on the top step or top cap unless the ladder is specifically designed for it (such as a platform ladder). Standing on the top puts the user above the ladder's design center of gravity and is a leading cause of stepladder falls.

5. B — A boom-supported aerial lift platform requires the worker to be tied off with a personal fall arrest or restraint system anchored to the manufacturer-designated point inside the basket. If the boom catapults or an obstruction strikes the basket, the harness keeps the worker inside.

6. D — Scissor lifts are protected by their own guardrail systems meeting OSHA height and strength requirements; OSHA does not generally require PFAS tie-off when the guardrails are intact. Workers must keep feet on the platform floor and avoid climbing on the rails.

7. A — Under 29 CFR 1910.178, a powered industrial truck operator must be trained on the specific equipment, evaluated by the employer, and certified before independent operation begins. The certification ties the training to the operator's demonstrated ability to safely operate the truck.

8. C — Refresher forklift training and evaluation are required at least every three years and whenever the operator is involved in an accident or near-miss, observed operating unsafely, assigned a new vehicle type, or working in a new environment. The refresher captures changes in equipment and conditions.

9. B — A powder-actuated tool may be operated only by an employee specifically trained on that tool, with the manufacturer's instructions available at the worksite. The trained-operator requirement reflects the serious projectile and recoil hazards these tools present when misused.

10. A — Portable circular saws must have an upper guard covering the top of the blade and a movable lower guard that automatically returns to cover the lower portion once the cut is complete. Removing or wedging the lower guard open is a top cause of severe lacerations.

11. C — OSHA 29 CFR 1910.215 limits the work rest gap on a bench grinder to a maximum of one-eighth inch from the wheel face. The tight clearance prevents the workpiece from being pulled into the gap and wedging between the rest and the wheel.

12. D — Pneumatic hose connections must be secured by positive means — typically a whip check (a wire cable) across the coupling — to prevent the hose from whipping uncontrolled if a coupling fails under pressure. A whipping hose can cause serious lacerations and eye injuries.

13. B — A chainsaw operator should wear chainsaw chaps (cut-resistant leg protection), eye and face protection, a hard hat with hearing protection, and cut-resistant gloves and boots. The PPE addresses the kickback, chain-contact, projectile, and noise hazards inherent to chainsaw work.

14. A — OSHA and NFPA 51 require oxygen and fuel-gas cylinders in storage to be separated by at least 20 feet or by a noncombustible barrier at least 5 feet high with a fire-resistance rating of one-half hour. The separation prevents fire propagation if either cylinder leaks.

15. D — Under 29 CFR 1910.106, no more than 60 gallons of Class I or Class II flammable liquids, and not more than 120 gallons of Class III combustible liquids, may be stored in a single approved storage cabinet. Storing more than these limits concentrates fuel beyond what the cabinet is designed to contain in a fire.

16. C — NFPA 30 defines a Class IA flammable liquid as one with a flash point below 73 °F and a boiling point below 100 °F. The combination identifies the most volatile liquids — for example, diethyl ether and pentane — that present extreme fire risk in normal conditions.

17. A — OSHA 29 CFR 1926.51 requires the employer to provide an adequate supply of potable drinking water at the worksite, in single-use containers or fountains, for all employees regardless of temperature. The requirement is part of basic worker sanitation, not a hot-weather-only rule.

18. B — OSHA 29 CFR 1926.51 sets a graduated toilet schedule that scales with crew size — generally one toilet per 20 workers for larger crews, with options for chemical toilets, recirculating toilets, or sewered facilities depending on the site. The schedule ensures access without unreasonable wait times.

19. D — When a medical clinic or hospital is not in near proximity to the worksite, OSHA requires the employer to make first-aid supplies available and to provide a person adequately trained in first aid to handle injuries until professional help arrives. The on-site capability is the bridge to definitive care.

20. A — Under 29 CFR 1910.38, an Emergency Action Plan for an employer with 11 or more employees must be in writing, kept in the workplace, and made available to employees for review. A written plan supports training, drills, and consistent response under stress.

21. C — A workplace Fire Prevention Plan under 29 CFR 1910.39 must address major fire hazards, the proper handling and storage of combustibles, ignition source controls, the type of fire-protection equipment used, and procedures for the control of hazardous waste. The required content makes the plan an operational document rather than paperwork.

22. B — A standard guardrail under 29 CFR 1926.502 has a top rail at 42 inches above the working surface, plus or minus 3 inches, with strength sufficient to withstand at least 200 pounds applied in any outward or downward direction. The dimensions and load criteria are designed to catch a worker's torso before they go over.

23. D — In addition to the top rail, OSHA guardrails must include a mid-rail (or equivalent intermediate member) at approximately half the top-rail height, and a toe board (typically 3½ inches high) where tools or materials could fall onto workers below. Together the elements prevent body, leg, and material falls.

24. A — Under 29 CFR 1926.502(d)(15), each anchorage used for personal fall arrest must support at least 5,000 pounds per attached worker, or be designed as part of a complete personal fall arrest system that maintains a safety factor of at least two. The high anchorage strength reflects the dynamic loads from fall arrest.

25. B — A personal fall arrest system must be rigged to limit the worker's free fall to no more than 6 feet, ensure that the worker cannot contact any lower level during deceleration, and limit the maximum arresting force to 1,800 pounds with a full body harness. The 6-foot limit caps fall energy before deceleration begins.

26. C — A self-retracting lifeline locks rapidly when subjected to acceleration, limiting free fall typically to two feet or less and engaging the deceleration mechanism almost immediately. The fast lockup makes SRLs the device of choice when adequate fall clearance below the work surface is limited.

27. A — A warning line system used in lieu of a guardrail or PFAS on a low-slope roof must be erected at least 6 feet from the roof edge (or 10 feet where mechanical equipment is in use parallel to the edge), with flagged lines, posts, and tensile strength meeting OSHA specifications. The standoff distance gives workers a visible signal of the leading edge.

28. D — A controlled access zone is defined by control lines marking the boundary of the work area, and entry is limited to authorized employees performing leading-edge or overhand bricklaying work. The CAZ is an alternative fall-protection method used where guardrails and PFAS are impractical.

29. B — A safety monitoring system requires a competent person whose only job is to recognize and warn workers of fall hazards in real time as they work near an unprotected edge. The monitor must have no other duties that could distract from continuous observation of the workers.

30. C — Under 29 CFR 1926.500, a "low-slope" roof is one with a slope of 4:12 (four units vertical to twelve units horizontal) or less. The classification matters because low-slope and steep-slope roofs have different fall-protection rules under Subpart M.

31. A — A mobile (rolling) scaffold under OSHA Subpart L must have a height-to-minimum-base ratio not exceeding 4:1 unless the scaffold is stabilized with outriggers, guys, or other restraints against tipping. The ratio prevents the scaffold from tipping during use or movement.

32. D — A two-point suspended scaffold (swing stage) must be suspended by ropes or wire ropes supported by overhead structural supports that meet OSHA strength requirements, and each worker on the platform must be tied off to an independent vertical lifeline. Independent tie-off prevents a single rope failure from dropping the entire platform.

33. B — Under 29 CFR 1910.147, an "authorized employee" is one who locks out or tags out machines or equipment in order to perform service or maintenance on it. The definition distinguishes them from "affected employees" — those who operate or use the equipment but do not perform the lockout.

34. C — The standard requires periodic inspection of energy-control procedures at least annually, conducted by an authorized employee other than the one(s) using the procedure under inspection. The annual review verifies that procedures remain effective and that employees are following them.

35. D — Before service work begins, the authorized employee must verify that energy isolation is complete by attempting to operate the machine controls and otherwise testing to confirm the machine cannot start. The "try" step in lock-tag-try catches isolation failures before workers are exposed.

36. A — Effective construction site security combines perimeter fencing, controlled access points, warning and identification signage, adequate lighting, and material storage controls (locked containers, inventoried tools) to deter theft and unauthorized entry. The layered approach is more effective than any single measure.

37. B — OSHA 29 CFR 1926.56 sets a minimum of 5 foot-candles for general construction-area illumination, with higher levels (10, 30, or more foot-candles) required for indoor work, shops, and tunnel/pit work. Adequate lighting reduces trips, falls, and tool injuries.

38. C — Heavy equipment swing zones must be barricaded or otherwise controlled to prevent workers from being struck by the rotating superstructure or counterweight. Caught-between and struck-by incidents involving the swing radius are a leading source of fatal construction equipment injuries.

39. D — Backing of heavy vehicles with restricted rear view is controlled by a trained spotter using established hand signals plus an operating backup alarm on the vehicle. The spotter-plus-alarm combination addresses the high fatality rate from back-over incidents on jobsites.

40. A — Under 29 CFR 1926.651(c), excavations 4 feet deep or more must have a stairway, ladder, ramp, or other safe means of egress located no more than 25 feet of lateral travel from any worker. The 25-foot rule ensures that workers can reach an exit quickly in an emergency.

41. C — A "competent person" under OSHA is one who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective action to eliminate them. The competent-person concept appears in many OSHA standards, including excavation, fall protection, and scaffolding.

42. B — OSHA classifies excavation soil into Type A (most stable, cohesive), Type B (intermediate), and Type C (least stable, granular or submerged) based on cohesion, grain size, and stability. The classification drives the choice of sloping, benching, or shoring required for a given depth.

43. A — Excavations made entirely in stable rock may have vertical sides without sloping, benching, or shoring, because the rock resists collapse on its own. The exemption applies only when the rock is truly stable; weathered or fractured rock is treated as soil.

44. D — When water accumulates in an excavation, employees may not work in the excavation unless adequate precautions are taken to protect them — such as special support systems, water removal, or safety harnesses with lifelines. Water saturation rapidly destabilizes trench walls.

45. B — Industry convention (not OSHA) assigns hard hat colors by role: white for managers/engineers, yellow for laborers, blue for electricians and operators, green for safety officers, and orange or red for visitors. The convention varies by site but supports quick visual identification of workers and roles.

46. C — ANSI/ISEA 107 classifies high-visibility safety apparel by performance class based on the minimum amount of background and retroreflective material on the garment. Class 3 garments offer the highest visibility and are required for workers in higher-risk traffic environments.

47. C — A safety-sensitive worker covered by DOT regulations is subject to pre-employment, random, post-accident, reasonable-suspicion, return-to-duty, and follow-up drug and alcohol testing. The categories together create a continuous monitoring framework for safety-critical work.

48. D — Property-carrying CMV drivers under FMCSA Hours of Service may drive a maximum of 11 hours following 10 consecutive hours off duty, within a 14-hour on-duty window that begins when the driver comes on duty. Drivers also need a 30-minute break after 8 hours of driving.

49. B — A driver vehicle inspection report covers service brakes, parking brake, steering, lights and reflectors, tires, horn, windshield wipers, mirrors, emergency equipment, and other safety-critical items. The DVIR creates a daily record of vehicle condition and any defects reported.

50. A — A contractor shipping hazardous materials in interstate commerce in Maryland must comply with U.S. DOT Hazardous Materials Regulations under 49 CFR Parts 100-185, including classification, packaging, labeling, marking, placarding, and shipping papers. The PHMSA regulations apply to highway, rail, water, and air shipments.

51. D — In Maryland, the Department of Labor (Division of Occupational and Professional Licensing) houses many of the trade licensing boards, including the Maryland Home Improvement Commission, the State Board of Plumbing, and the State Board of HVACR Contractors. Centralizing these boards under one agency streamlines enforcement and information sharing.

52. C — Maryland's registered apprenticeship system is administered by the Maryland Apprenticeship and Training Council (MATC) within the Maryland Department of Labor. The MATC approves sponsors, registers apprentices, and oversees standards for skilled-trade apprenticeships statewide.

53. B — MHIC surety bonds must be issued by a surety company authorized to write surety business in Maryland and filed with the Commission as financial security. Bonds from unauthorized sureties or non-bond instruments do not satisfy the financial security requirement.

54. A — The Maryland Workers' Compensation Commission handles disputed claims by investigating the claim, holding a hearing before a commissioner, and issuing a written decision (an award or denial) appealable to circuit court. The Commission has primary jurisdiction over WC benefit disputes.

55. D — Maryland's veterans' hiring preference statutes provide eligible veterans with an added preference (typically additional points or priority consideration) in qualifying state and local government hiring decisions. The preference recognizes service and supports veteran re-employment.