

COE EM 385-1-1 (2014) CONSTRUCTION SAFETY AND HEALTH REQUIREMENTS

NAVFAC EM 385-1-1 150-QUESTION OPEN BOOK EXAM STUDY QUESTIONS

These Safety and Health Level I Examination study questions have been prepared for all military and civilian personnel, such as, but not limited to, Chiefs of Construction, Construction Project Managers, Construction Quality Assurance personnel, Construction Contract Management and Contract Specialists, Environmental Engineers, Engineering Technicians, Design Managers, and Project Managers, whose duties require visits to contract construction projects or require contract negotiations.

This document is designed to help familiarize personnel with the use of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 (2014) and is required for construction personnel described above.

Section 1

1. The provisions of this manual implement and supplement the safety and health standards and requirements contained in 29 CFR 1910, 29 CFR 1926, 29 CFR 1960, EO 12196, FAR Clause 52.236.13, DODI 6055.1, AR 40-5, and AR 385-10. Where more stringent safety and occupational health standards are set forth in these requirements and regulations, _____.
 - a. COE-385-1-1 will apply
 - b. 29 CFR 1910 will apply
 - c. 29 CFR 1926 will apply
 - d. the more stringent shall apply

2. For limited scope supply, service and R&D contracts, the Contracting Officer:
 - a. doesn't need to worry about safety.
 - b. may not change the contract safety requirements.
 - c. may authorize an abbreviated APP.
 - d. may combine contracts.

3. Frequent inspections/audits by a Competent Person of the work sites, material, and equipment will be done to ensure compliance with the APP and the EM385. These inspections/audits will be documented to include:

- a. the name of the inspector.
- b. the date.
- c. all findings.
- d. all of the above.

4. Before beginning each work activity, task, or DFOW, the contractor performing that work activity shall prepare the _____.

- a. Preparatory Phase Checklist
- b. APP
- c. initial AHA
- d. Demolition Plan

5. The AHA will be continuously reviewed and modified as necessary to address _____.

- a. changing site conditions
- b. changing operations
- c. change of competent/qualified person(s)
- d. all of the above

6. The SSHO(s), as a minimum, must have completed _____ or equivalent.

- a. 10-hour OSHA training
- b. 30-hour OSHA construction training class
- c. STS certification
- d. High school

7. In addition to the training requirements, the SSHO is also required to have proof of employment for: (1) Five (5) years of continuous construction safety experience, or (2) Five (5) years of continuous general industry safety experience, or (3) If the SSHO has a Third-party, Nationally accredited SOH-related certification, only four (4) years of experience is needed.

- a. True
- b. False

8. All training will be documented in writing, to include the date, name, content, and _____.

- a. Trainer.
- b. Test scores.
- c. Certificates issued.
- d. Weather.

9. Contractors are responsible for notifying OSHA in accordance with 29 CFR 1904.39 within 8-hours when their employee(s) is:

- a. Fatally injured
- b. 1 or more persons are hospitalized
- c. Both a and b
- d. Contractors are not required to notify OSHA

10. In areas with frequent inclement weather, the APP shall include discussion of:

- a. Severe weather triggers to alert the SSHO to monitor weather triggers.
- b. Training on severe weather precautions and actions.
- c. Identified area of retreat, preferably a substantial building.
- d. All of the above.

11. Employees working in a remote location or away from other workers shall be provided:

- a. an effective means of emergency communications.
- b. a box lunch.
- c. a vehicle at their disposal.
- d. a map.

Section 2

12. Outlets dispensing non-potable water shall:

- a. have a conspicuously posted Caution sign.
- b. not be allowed on Government construction sites.
- c. have a failsafe lock.
- d. be no larger than one inch in diameter.

13. Open containers such as barrels, pails, or tanks, may be used for drinking water if properly sterilized.

- a. True
- b. False

Section 3

14. Medical facilities and personnel expected to treat injured employees shall _____.

- a. be informed of the nature of the work to be performed.
- b. be informed of the injuries/illnesses prevalent on such jobsites.
- c. both a & b
- d. have proper insurance coverage.

15. When a medical facility or physician is not accessible within five minutes of an injury to a group of two or more employees for the treatment of injuries, at least two employees on each shift shall be qualified to administer _____.

- a. EMT duties and first responder duties.
- b. First aid and CPR
- c. CPR and EMT duties
- d. First responder duties and first aid

16. The best type of ANSI Z308.1 first aid container for an outdoor setting such as a construction site is _____ and should be checked by the employer _____.

- a. Type I; prior to their use on site and monthly
- b. Type III; prior to their use and at least every six weeks
- c. Type IV; prior to their use and bi-weekly
- d. Type III or Type IV; prior to their use on site and at least every three months

Section 4

17. Trailers and other temporary structures used as field offices must be:

- a. Anchored to ground anchors.
- b. Designed to withstand winds.
- c. Meet applicable state or local standards.
- d. All of the above.

18. Temporary project fencing shall extend from grade to _____ above grade.

- a. a minimum of 48 inches
- b. a safe distance
- c. no more than 60 inches
- d. a minimum of 6 feet

19. Signs warning of the presence of construction hazards and requiring unauthorized person to keep out shall be posted at every _____ feet of fencing.

- a. 50
- b. 100
- c. 150
- d. 200

20. Depending upon the nature and location of the project site, the GDA may determine that temporary project fencing is not required.

- a. True
- b. False

Section 5

21. Personal Protective Equipment is the first measure to be taken to control hazards to an acceptable level.

- a. True
- b. False

22. When employees provide their own safety equipment or PPE, the _____ is responsible for assuring its adequacy in protecting against the hazard and its state of repair.

- a. employee
- b. employer
- c. OSHA
- d. Government

23. When noise hazard are known or expected, the employer shall develop a(n) _____ that includes identification and assessment of noise hazards and the measures to be taken to protect personnel against them.

- a. APP
- b. AHA
- c. Hearing Conservation Program
- d. Noise Reduction Rating

24. Certain activities and areas may be considered as non-hard hat areas if:
- a. the job is indoors.
 - b. the hard hat is stressing the worker's neck.
 - c. identified and properly documented in the AHA.
 - d. Never.
25. Respiratory protection programs shall address _____.
- a. respirator selection procedures
 - b. medical evaluations and fit testing procedures
 - c. training of employees
 - d. all of the above
26. In order to protect against electric arc flash, the following is required for any person who enters the arc flash zone:
- a. Clothing of synthetic materials shall not be worn.
 - b. Wooden tools will not be used.
 - c. Use clothing and equipment in accordance with NFPA 70E.
 - d. All of the above.
27. At least one _____ shall be immediately available at locations where employees work over or immediately next to the water.
- a. lifeguard
 - b. skiff
 - c. SCUBA tank
 - d. trained diver
28. Which of the following is not a requirement for using Automatic-Inflatable Personal Flotation Devices:
- a. Provides 100 pounds minimum buoyancy post deployment.
 - b. Only used by workers over 16 years old and who weigh more than 90 pounds.
 - c. Type V or better, USCG approved for Commercial Use.
 - d. An AHA is performed for the activity.

29. All Personal Flotation Devices shall be of a highly visible orange/reddish color. In addition, PFD's shall:

- a. Have retroreflective material on front and back per USCG requirements.
- b. Have a USCG approved automatically activated light unless used only during daylight hours.
- c. Both a & b
- d. Be replaced every six months

Section 6

30. Operations, materials, and equipment involving potential exposure to hazardous or toxic agents or environments shall be evaluated by a qualified _____ to formulate a hazard control program.

- a. Industrial Hygienist or Competent Person
- b. Competent Person or Project Manager
- c. Industrial hygienist or Program Manager
- d. All of the above

31. A written hazard communication program shall address the following in project specific detail:

- a. Hazardous or toxic agent inventory and labeling
- b. MSDS or SDS management
- c. Employee information and training
- d. All of the above.

32. When eyes or body of any person may be exposed to hazardous or toxic agents, suitable facilities for quick drenching or flushing of the eyes and body shall be provided in the work area for immediate emergency use, and shall be:

- a. within ten feet away.
- b. accessible within the project site.
- c. within ten seconds of the hazardous material.
- d. within walking distance

33. Every hazardous or toxic agent being transported for disposal shall be transported with a copy of the substance's _____ whenever applicable.

- a. Manufacturers handling procedures
- b. Substance control procedures
- c. MSDS (SDS)
- d. Chemical information

34. Protection against hazards from insects may include all of the following EXCEPT:

- a. burning off surrounding ground cover
- b. clothing treated with DEET or Permethrin
- c. drainage or spraying of breeding areas
- d. smudge pots and aerosols

35. Areas in which lasers are used shall be:

- a. 200 feet from all permanent structures.
- b. posted with standard laser warning signs.
- c. off limits to all Government personnel.
- d. none of the above.

36. Airborne contaminants created by portable equipment (such as drills, saws, and grinding machines) in concentrations exceeding acceptable safe limits shall be _____ at the source.

- a. completely eliminated
- b. be reduced
- c. effectively controlled
- d. none of the above

37. Silica sand shall not be used as an abrasive blasting media. All of the following are suggested abrasive blasting alternate materials, except:

- a. baking soda.
- b. corn cob granules.
- c. nut shells
- d. recycled plastic.

38. In hot environments, all of the following guidelines shall be followed to prevent heat related injury, except:

- a. Implement a buddy system. Workers should not only monitor themselves, but also be alert to changes and the symptoms of their co-workers.
- b. Sports drinks such as Gatorade shall be provided to all employees.
- c. Individuals not acclimatized to the heat shall be allowed additional breaks, with period and number as determined by the SSHO.
- d. Provide recovery areas where possible, such as air-conditioned enclosures, or shaded areas, with intermittent breaks and water breaks.

Section 7

39. Means of egress shall be illuminated, with emergency and non-emergency lighting, to provide a minimum of _____ measured at the floor.

- a. 0.5 footcandles
- b. 1 footcandle
- c. 5 footcandles
- d. 10 footcandles

Section 8

40. Construction areas shall be posted with legible traffic signs at points of hazard in accordance with:

- a. EM385.
- b. the contract specification.
- c. OSHA.
- d. MUTCD

41. Manual (hand) signals may be used when the distance between the operator and signal person is not more than _____.

- a. 50 feet (15 m)
- b. 25 feet (7.5 m)
- c. 100 feet (30.4 m)
- d. 10 feet (3 m)

42. All barricades, warning signs, lights, temporary signals, other devices, flagmen, and signaling devices shall _____.

- a. meet the requirements of the local base safety office
- b. meet or exceed the minimum requirements of the local DOT requirements.
- c. comply with ANSI 104-7
- d. be used only when there is pedestrian and private motor vehicle traffic through the construction site.

Section 9

43. For fire protection and prevention, the government designated authority shall survey all activities and determine which ones require a

_____.

- a. outage permit
- b. confine space permit
- c. hot work permit
- d. electrical permit

44. Ventilation adequate to prevent the accumulation of _____ to hazardous levels shall be provided in all areas where flammable and combustible liquids are handled or used.

- a. flammable gases
- b. flammable vapors
- c. combustible materials
- d. combustible gases

45. When working with hot substances, _____ fire extinguisher(s) rated 2A:20B:C shall be available within _____ feet of the working kettles.

- a. one; 20
- b. two; 25
- c. one; 50
- d. two; 50

46. Which of the following requirements for using kettles is NOT correct:

- a. The kettle should be sized correctly for the job.
- b. Kettle should be located so that means of egress is not restricted, and no closer than 10 feet of the egress path.
- c. The operator must be at the level of kettle, within eyesight, and within 50 feet of the kettle.
- d. The kettle lid should open away from a building

47. Fire extinguishers shall be _____, and shall be suitably placed, distinctly marked, and readily accessible.

- a. fully charged
- b. in operable condition
- c. stored in a dust proof box
- d. a & b

Section 10

48. Employees performing welding, cutting, and heating work shall be protected by PPE appropriate for the hazards that they may encounter, and:

- a. based upon an AHA specifically for the hot work operation they will be performing.
- b. Including safety glasses and hearing protection.
- c. have flameproof welder's shoes.
- d. keep water nearby in case their shirt catches on fire.

49. When doing oxyfuel welding, torches shall be lighted by _____.

- a. candle
- b. friction lighter
- c. matches
- d. from hot work

Section 11

50. Employees performing electrical work shall be Qualified Personnel with verifiable credentials consisting of State, National and/or Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and:

- a. must be laminated.
- b. must be renewed every six months.
- c. should be identified in the appropriate AHA.
- d. should be signed by the project manager.

51. If it is determined that equipment must be worked on in an energized condition, the contractor shall submit an energized work plan, containing eight specified items, including all of the following except:

- a. Justification why work must be performed in energized condition.
- b. Electrical shock analysis and safe boundaries.
- c. Evidence of completing job briefing.
- d. Photographs of equipment being worked on.

52. The number of workers sufficient to perform an electrical job safely and provide a safe working environment shall be determined by:

- a. The SSHO.
- b. The Electrical Qualified Person.
- c. The project manager.
- d. The electrical engineer.

53. PPE that provides appropriate arc flash protection is required for all personnel working on or near exposed energized equipment operating at 50 volts or more, based on:

- a. Equipment arc flash labels
- b. NFPA 70E task tables
- c. Hazard analysis/arc flash analysis
- d. All of the above

54. LHE operations adjacent to overhead lines are prohibited unless:

- a. Power has been shut off and positive means taken to prevent the lines from being energized.
- b. A 15 ft clearance is maintained.
- c. A 20 ft clearance is maintained.
- d. Either a or c

55. Location of electrical equipment and wiring in a room where fuels or solvents are not normally present but could accidentally exist is a hazardous location _____.

- a. Class IV.
- b. Class III Division 1.
- c. Class II Division 2.
- d. Class I Division 2.

56. Requirements detailed in _____ shall be followed when placing and removing protective grounds.

- a. OSHA
- b. the contract specification
- c. NEC
- d. NFPA

57. Before climbing poles, ladders, scaffolds or other elevated structures an inspection shall determine that:

- a. the structures are capable of sustaining the additional or unbalanced stresses to which they will be subjected.
- b. employees are wearing fall protection harnesses.
- c. climbing devices meet NFPA standards.
- d. all of the above

Section 12

58. A contractor's Hazardous Energy Control Plan (HECP) must comply with:

- a. EM385 Section 12.
- b. 1910.147
- c. ANSI Z244.1 and A10.44
- d. all of the above.

59. During shift and/or personnel changes, provisions shall be made to ensure the continuity of lockout/tagout protection by including the following in the HECP:

- a. Procedural steps and responsibilities for transfer of locks, tags, and other control devices.
- b. Procedural steps and responsibilities and requirements for testing the system to verify the effectiveness of isolation and control.
- c. Procedural steps and responsibilities for turning over tools to your relief.
- d. a and b.

60. For areas accessible by the public, hazardous energy must be controlled by a system of tagout devices.

- a. True
- b. False

Section 13

61. All portable, power-driven circular saws shall:

- a. Be equipped with guards above and below the baseplate or shoe.
- b. Be double insulated.
- c. Be equipped with anti-kickback devices.
- d. Be equipped with sawdust collector

62. Radial arm power saws shall be equipped with an _____.

- a. automatic brake
- b. automatic vacuum
- c. laser guided line
- d. depth gauge

63. For pneumatic tools, _____ shall be provided at connections between tool and hose and at all quick makeup type connections.

- a. duct tape.
- b. a welded fitting
- c. safety lashing
- d. a threaded fitting

64. A _____, for explosive-actuated tools, is one who has been trained by an authorized instructor (one who has been trained, authorized, and provided an authorized instructor's card by the tool manufacturer or by an authorized representative of the tool manufacturer).

- a. qualified operator
- b. authorized user
- c. skilled person
- d. none of the above

65. When using a power driven nailer on roofing materials, it may be operated in the contact trip mode only when allowed by the manufacturer, and when _____.

- a. the operator has secure footing.
- b. the contractor's insurance premium is paid up.
- c. the nailer is set for full automatic.
- d. the materials are already glued to the roof.

Section 14

66. Where the movement of materials may be hazardous to persons, _____ or other devices shall be used to control the loads being handled by hoisting equipment.

- a. taglines
- b. banding
- c. cradles
- d. none of the above

67. Stored lumber to be handled manually shall be stacked not more than _____ feet high.

- a. 8
- b. 12
- c. 16
- d. 20

68. Work areas shall be inspected _____ for adequate housekeeping and findings shall be recorded.

- a. weekly
- b. daily
- c. twice weekly
- d. monthly

Section 15

69. When hoisting loads, _____ shall be used to secure the load and rigging.

- a. a positive latching device
- b. only alloyed chain
- c. hooks, shackles, and rings
- d. none of the above

70. Any worker engaged in duties and performance of rigging shall be a Qualified Rigger, meeting all of the following requirements, except:

- a. Be at least 18 years of age.
- b. Attended OSHA rigging school.
- c. Be able to communicate effectively with the crane operator, the lift supervisor, flagman, and affected employees on site.
- d. Have basic knowledge and understanding of equipment operating characteristics, capabilities, and limitations.

71. A multiple lift is considered a critical lift requiring a critical lift plan, and may be used for the following purposes:

- a. Dredging.
- b. Pile Driving.
- c. Erecting/Placing Structural steel.
- d. Lifting materials over three stories.

72. All slings shall be manufactured under ASME B30.9 guidelines and must have an affixed permanent identification tag that includes:

- a. Name or trademark of the manufacturer
- b. WLL for given type of hitch and configuration
- c. Type of material used
- d. All of the above

Section 16

73. The following are acceptable crane operator qualifications/certifications:

- a. Current certification by a Nationally Accredited Crane Operator Testing Organization.
- b. Qualification by an audited employer program.
- c. Manufacturer's training course.
- d. Either a or b

74. Before using a crane that has been idle for three months or more, perform the following inspection:

- a. Initial Inspection
- b. Periodic Inspection.
- c. Start up inspection.
- d. Annual inspection.

75. At the beginning of each shift, a CP shall perform a _____ of all running ropes, counterweight ropes, and load trolley ropes in accordance with Section 16, applicable ASME standards, OSHA regulations, and the manufacturer's recommendations.

- a. Initial inspection
- b. Visual inspection
- c. NDT inspection
- d. Annual inspection

76. Crane Category I operational aids include:

- a. Boom angle or radius indicator.
- b. Anti two blocking (A2B) device.
- c. Boom length indicator.
- d. None of the above.

77. Critical lift plans are required for all of the following except:

- a. Lifts of piles greater than 100 feet long.
- b. Lifts made with more than one LHE.
- c. Lifts where the center of gravity could change.
- d. Lifts when the load weight is 75% of the rated capacity.

Section 18

78. Commercial cargo vehicles or trucks must use a backup alarm at all times.

- a. True
- b. False

79. When a bus, truck, or truck-trailer combination is parked or disabled on a highway or the adjacent shoulder during the daytime, only red flags shall be displayed.

- a. True
- b. False

80. Mechanized equipment is intended for use on construction sites, and not for operations on public highways. Such mechanized equipment must meet all of the following requirements except:

- a. Have safety glass in windshields, windows, and doors.
- b. Have an operable fuel gauge.
- c. Have non-slip surfaces on steps.
- d. Have fall protection tie off points.

81. No one shall be permitted in the truck cab during loading operations except the driver, and then only if the truck has a _____.

- a. Cab protector
- b. Rollover Protective Structures (ROPS)
- c. Both a and b
- d. All occupants must vacate vehicles while loading

Section 20

82. All pressurized equipment and systems shall be provided with _____.

- a. a pressure gauge
- b. a safety and relief valve
- c. inspection and testing records with certificate
- d. all of the above

83. Except _____, safety lashings or suitable double action locking devices shall be used at connections to machines of high pressure hose lines and between high pressure hose lines.

- a. when operating at low pressure
- b. where automatic shutoff valves are used
- c. when no one is working in area of high pressure connection
- d. when line is of small diameter

84. When a boiler is being placed in service, an operator shall be in constant attendance _____.

- a. until controls have functioned through several cycles.
- b. for a period of 24 hours.
- c. Either a or b, whichever is greater
- d. Only the inspector must remain in attendance

85. Which of the following apply to compressed gas cylinders storage?

- a. Stored in well-ventilated locations
- b. Segregated by gas group with empty cylinders labeled as empty and stored in the same manner.
- c. Separated from flammable, combustible or ignitable materials.
- d. All of the above

86. The temperature of compressed gas cylinders shall not be allowed to exceed _____ degree F.

- a. 120
- b. 125
- c. 130
- d. 135

87. All compressed gas cylinders in service shall be secured in _____.

- a. Substantial fixed or portable racks
- b. Substantial hand trucks.
- c. Attached with ropes or ties to a permanent and substantial structural member.
- d. both a and b

Section 21

88. The first control measure (hierarchy of controls) to be used to abate fall hazards is _____.

- a. Work Platforms
- b. Prevention
- c. Elimination
- d. Administrative Controls

89. When applicable, a Site Specific Fall Protection and Prevention Plan should be submitted with the APP, and should be updated:

- a. when conditions change.
- b. quarterly.
- c. at least every six months.
- d. a and c.

90. The use of a controlled access zone as a _____ method is prohibited.

- a. confined space safety
- b. rest area
- c. fall protection
- d. working platform

91. A standard guardrail system shall be provided with toe boards _____.

- a. at all open sides/end locations where persons and material are required or permitted to pass or work under the elevated platform or where needed to prevent persons from falling from the elevated platform.
- b. at all stairs where persons may fall.
- c. on all scaffolds and work platforms.
- d. only as required by the contractors' competent person.

92. Toe boards shall withstand without failure a force of _____ applied in an outward or downward direction at any point along the toe board.

- a. 25 lbs (11.5 kg)
- b. 50 lbs (23 kg)
- c. 75 lbs (44.5 kg)
- d. 100 lbs (46 kg)

93. Hole covers should be capable of supporting, without failure, _____ weight of the worker, equipment and material combined.

- a. the estimated
- b. one and a half times
- c. at least twice
- d. none of the above

94. Personal fall protection equipment and systems includes all of the following, except:

- a. Fall arrest systems.
- b. Positioning systems.
- c. Guardrail systems.
- d. Restraint systems.

95. Personal fall protection equipment shall be inspected by the end user prior to each use to determine that it is in safe working condition. A competent person for fall protection shall inspect the equipment at least once semi-annually and whenever subjected to a fall or impacted. Defective equipment shall be immediately _____.

- a. tagged for further testing
- b. used for positioning and not as primary fall protection equipment
- c. brought to the competent persons attention for evaluation
- d. removed from service and replaced

96. For workers with a body weight less than _____, a specially designed PFAS harness and also a specially designed energy absorbing lanyard shall be utilized which will properly deploy if this person were to fall.

- a. 110 lbs.
- b. 130 lbs.
- c. 150 lbs.
- d. 170 lbs.

97. A personal fall arrest system shall be rigged such that a worker neither free fall more than _____ feet, nor contact any lower level or other physical hazard in the path of the fall.

- a. 6
- b. 8
- c. 10
- d. 12

98. Ropes, straps, and webbing used in PFAS lanyards shall be made from _____.

- a. manila fibers
- b. sisal fibers
- c. synthetic fibers
- d. all of the above

99. A ladder climbing device is a sleeve or cable/rope attached to a fixed ladder over _____ feet. The free fall distance when using an LCD shall not exceed _____ feet.

- a. 20, 5
- b. 30, 5
- c. 20, 2
- d. 30, 2

100. A restraint system shall be used with scissor lifts:

- a. in addition to guardrails
- b. when the lift is not equipped with guardrails
- c. when working over six feet
- d. none of the above

101. A warning line system shall consist of _____ supported by stanchions, and shall be erected around all sides of the work area.

- a. wires or rope
- b. chains
- c. construction tape
- d. a & b.

102. When workers are using fall protection equipment, the following requirement(s) shall be met:

- a. a rescue plan providing for self rescue and assisted rescue procedures
- b. rescue anchorages
- c. spotter or buddy system
- d. all of the above

103. When working over or near water where the distance from the walking/working surface to the water's surface is less than _____ feet and the water depth is less than _____ feet, or other hazards are present, fall protection shall be required and PFDs are not required.

- a. 20; 20
- b. 25, 10
- c. 20, 15
- d. 15, 10

Section 22

104. Contractors shall use a scaffold tagging system, with color coded tags, which are readily visible, withstand the environment, and include:

- a. the project manager's name
- b. the expiration date
- c. the Competent Person's name and signature
- d. all of the above

105. Anyone involved in erecting, disassembling, moving, operating, using, repairing, maintaining or inspecting a scaffold shall:

- a. have completed a ten hour OSHA class in scaffolding
- b. be a Competent Person
- c. be trained by a Competent Person
- d. have one year experience on the brand of scaffolding

106. Scaffold planks shall be maintained in good condition, and shall not be used when:

- a. cracks equal the width of the board
- b. the plank has saw kerfs
- c. notches deeper than $\frac{1}{4}$ the width of the plank
- d. all of the above

107. When scaffold end frames are designed to be used as a ladder, or where bolted on ladders are used, the maximum height will be limited to _____ unless fall protection is used.

- a. 10 feet
- b. 15 feet
- c. 20 feet
- d. 25 feet

108. When operating an aerial lift:

- a. occupants shall always stand firmly on the floor of the basket
- b. lift controls shall be tested each day prior to use.
- c. wheels shall be chocked on an incline.
- d. all of the above.

Section 23

109. Prior to initiating demolition activities the following shall be accomplished by a Registered Professional Engineer:

- a. Engineering Survey
- b. Fall protection Plan
- c. Demolition/Renovation Plan
- d. Both a and c

110. During demolition, all material chutes, or sections thereof, at an angle of more than _____ from the horizontal shall be enclosed, except for openings equipped with closures at or about floor level for the insertion of materials.

- a. 30 degrees
- b. 45 degrees
- c. 60 degrees
- d. none of the above

Section 24

111. When working on roofs, access points and storage areas shall:

- a. be locked for security.
- b. be protected from the weather.
- c. be connected to the work area by an access path formed by two warning lines.
- d. None of the above.

112. The length of stepladders shall not exceed _____.

- a. 8 ft (2.4 m)
- b. 12 ft (3.6 m)
- c. 18 ft (5.5 m)
- d. 20 ft (6 m)

113. On portable ladders, spacing of rungs shall be _____ on center and uniform.

- a. 12 inches
- b. 8 to 14 inches
- c. no more than 15 inches
- d. no less than 10 inches

114. When setting up a ladder, the step across distance from the nearest edge of the ladder to the nearest edge of equipment or structure shall be not more than _____ inches, or less than _____ inches.

- a. 10; 5
- b. 12; 2.5
- c. 15; 7
- d. 12; 6

115. Under no conditions may work of any kind be performed on portable ladders unless fall protection is provided.

- a. True
- b. False

116. The height of handrails shall be not more than _____ inches nor less than _____ inches from upper surface of handrail to surface of tread, in line with face of riser or to surface of ramp.

- a. 38, 34
- b. 34, 30
- c. 36, 32
- d. 35, 31

117. Every hatchway and chute floor opening shall be guarded by a _____ cover. The opening shall be barricaded with railings so as to leave only one exposed side; the exposed side shall be provided either with a swinging gate or so offset that a person cannot walk into the opening.

- a. steel
- b. plywood
- c. hinged floor-opening
- d. none of the above.

118. Non load bearing skylights shall be guarded by any of the following, except:

- a. A load bearing skylight screen.
- b. A cover.
- c. A safety monitor.
- d. A railing system along all exposed sides.

119. On all structures 20 ft (6 m) or more in height, _____ shall be provided during construction.

- a. portable ladders
- b. fixed ladders
- c. stairways
- d. elevators

Section 25

120. For excavations or trenches greater than _____ in depth, both an Excavation/Trench Plan and AHA are required. Less than that depth, an AHA is required, but the Excavation/Trenching Plan is optional.

- a. 3 feet
- b. 5 feet
- c. 7 feet
- d. 9 feet

121. Where excavations are to be performed in areas known or suspected to contain explosives, unexploded munitions, or military ordinance, surface and subsurface clearance by _____ shall be accomplished prior to excavation work.

- a. Qualified explosive ordnance disposal (EOD) personnel
- b. Registered professional engineer (RPE)
- c. Government OE Safety Specialists.
- d. Base Civil Engineers

122. When workers will be in or around an excavation, a competent person shall inspect the excavation, the adjacent areas, and protective systems at various times, including daily, before each work shift, as needed throughout the work shifts, and _____.

- a. during lunch break.

- b. after other events that could increase hazards.
- c. at the end of the shift.
- d. none of the above.

123. In locations where oxygen deficiency or gaseous conditions are known or suspected, in excavations 4 feet or greater in depth, air in the excavation shall be tested prior to the start of _____ or more often if directed by the GDA.

- a. Each day
- b. Each shift
- c. Each DFOW
- d. Each new excavation

124. Employees shall not work in excavations in which there is accumulated water or in which water is accumulating, _____.

- a. unless the depth of the water and the condition of the trench sides look safe
- b. unless the water hazards posed by accumulation are controlled
- c. unless a Activity Hazard Analysis allows entry
- d. none of the above

125. Excavated material shall be placed at least _____ from the edge of an excavation or shall be retained by devices that are sufficient to prevent the materials from falling into the excavation. In any case, material shall be placed at a distance to prevent excessive loading on the face of the excavation.

- a. 2 ft (0.6 m)
- b. 3 ft (0.9 m)
- c. 14 ft (2 m)
- d. 5 ft (1.5 m)

126. Protection shall be provided to prevent personnel, vehicles, and equipment from falling into excavations. What class of perimeter protection is required for excavations exposed to members of the public or vehicles, or equipment?

- a. Class I
- b. Class II
- c. Class III
- d. None of the above

127. Where personnel are required to enter excavations over _____ in depth, sufficient stairs, ramps, or ladders shall be provided to require no more than _____ of lateral travel.

- a. 8 feet, 20 feet

- b. 4 feet, 20 feet
- c. 8 feet, 25 feet
- d. 4 feet, 25 feet

128. When access to excavations in excess of _____ ft in depth is required, ramps, stairs, or mechanical personnel hoists shall be provided.

- a. 6
- b. 10
- c. 20
- d. 22

129. For shield or support systems used in trench excavations, excavation of earth material below the bottom of the support system or shield shall be permitted:

- a. to a level no greater than 2 feet below the bottom of the shield/support
- b. if the shield/support is designed to resist the forces calculated for the full depth of the trench
- c. there is no indication of a possible loss of soil from below or behind the bottom of the shield/support
- d. all of the above

Section 27

130. Precast concrete operations shall:

- a. be planned and designed by a registered professional engineer.
- b. have plans with detail instructions and sketches indicating prescribed method of erection.
- c. require five days advance notice before starting work.
- d. a and b

131. A restricted zone shall be established whenever a masonry wall is being constructed. The restricted zone shall be:

- a. equal to the height of the wall to be constructed plus 4 feet.
- b. established on the side of the wall with the scaffold.
- c. restricted to contractor employees.
- d. all of the above.

132. Prior to the start of roof work, a structural analysis of the roof shall be conducted by a _____ to assure that the load capacity of the roof deck will not be exceeded.

- a. Competent Person

- b. Qualified Person
- c. Registered Professional Engineer
- d. CHST

133. For roof work on all roofs greater than _____ feet in height, a hoisting device, stairways, or progressive platforms shall be furnished for supplying materials and equipment.

- a. 12
- b. 16
- c. 18
- d. 20

134. Materials may not be stored within 6 feet of a roof edge unless:

- a. guard rails are erected at the roof edge.
- b. the materials weigh less than 500 pounds.
- c. the area directly below the roof marked with warning lines.
- d. the materials are used the same day.

Section 28

135. Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than _____ above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, engineered fall protection systems, personal fall arrest systems, positioning or restraint systems.

- a. 6 ft (1.8 m)
- b. 8 ft (2.4 m)
- c. 12 ft (3.6 m)
- d. 18 ft (5.5 m)

136. Before erection of any structural steel, a Steel Erection Plan signed and approved by the competent person will be submitted.

- a. True
- b. False

137. A steel erection contractor shall not erect steel unless it has received written notification that the concrete in the footings has attained:

- a. sufficient strength to support the loads imposed during steel erection.
- b. 75% of the intended minimum compressive design strength.
- c. a really, really hard surface
- d. a & b

Section 30

138. Contractors must submit the following minimum dive experience qualifications for each dive team member:

- a. One year commercial experience in the applicable position
- b. PADI dive log
- c. Four working dives with similar decompression techniques as the contract, including one performed during six months prior to the contract
- d. a & c

139. Diving submittal documents must be independently reviewed and accepted by:

- a. Designated Dive Coordinator (DDC)
- b. Alternate Dive Coordinator (ADC)
- c. Diving Safety Representative (DSR)
- d. Two of the following: DDC/ADC/DSR

140. A dive operations plan, AHA, emergency management plan, and _____ will be developed for each separate diving operation.

- a. Personnel list with qualifications.
- b. Next of kin listing.
- c. Endangered wildlife listing.
- d. Lunch menu.

141. Complex projects involving more than one diving task, dive location, and/or dive team require task specific dive plans as part of the overall Dive Operations Plan.

- a. True
- b. False

142. Staging areas where divers enter the water will be selected based on a hazard analysis considering:

- a. Diver hazards in route from surface to work area.
- b. Ability of standby diver to reach the diver quickly.
- c. Whether topside equipment can function properly.
- d. All of the above.

143. SCUBA diving operations can be performed under the same conditions as surface supplied air operations.

- a. True
- b. False

Section 31

144. Tree crews, where climbing is necessary, shall:

- a. Have a secondary climber who could assist in a rescue.
- b. Not climb higher than 18 feet.
- c. Work nearby a crew who could assist in a rescue.
- d. Either a & c.

Section 32

145. When work is to be performed at an airfield where flying is controlled, permission to enter a landing area shall be obtained from _____ every time entry is required, unless the landing area has been closed by the airfield operator and marked as hazardous.

- a. GDA
- b. Airfield Manager
- c. Control Tower Operator
- d. Controlling Contractor

Section 33

146. Under no circumstances can 40 hour HAZWOPER training be obtained on-line.

- a. True
- b. False

Section 34

147. Duties of the confined spaces competent person include all of the following except:

- a. Identify and label all PRCS at the jobsite.
- b. Develop and implement a site specific confined space program.

- c. Perform physical exams of all personnel exiting PRCS.
- d. Coordinate rescue and emergency services.

148. All of the following elements shall be addressed in a confined space program, except:

- a. worker's height and dimensions
- b. conditions for safe confined space entry
- c. equipment to be used for confined space entry
- d. procedures for evaluating PRCS conditions when entry is conducted

149. One of the four conditions for a _____ is that a confined space contains a material that has the potential for engulfing an entrant.

- a. Non-permit-required confined space (NPRCS)
- b. Permit-required confined space (PRCS)
- c. Confined space Competent Person (CSCP)
- d. Limited means of access facility (LMAF)

150. A confined space is a space that:

- a. is large enough and so configured that a person can bodily enter and perform assigned work.
- b. has limited or restricted means for entry or exit.
- c. is not designed for continuous employee occupancy.
- d. all of the above