



# ESSENTIALS

OF FIRE FIGHTING

EXAM PREP



## Scene Lighting, Rescue Tools, Vehicle Extrication, and Technical Rescue

### Multiple Choice

Write the letter of the best answer on the blank provided.

- \_\_\_\_\_ 1. Which of the following is powered by the power take-off system? (480)
- A. Portable lights
  - B. Portable electric generator
  - C. Apparatus electrical system
  - D. Vehicle-mounted generator
- \_\_\_\_\_ 2. Which of the following emergency scene lighting devices has the disadvantages of limited power supply and mobility? (481)
- A. Portable lights
  - B. Portable electric generator
  - C. Vehicle-mounted generator
  - D. Apparatus electrical system
- \_\_\_\_\_ 3. What type of emergency scene lighting equipment is used to light remote areas of an incident scene? (481)
- A. Fixed lights
  - B. Portable lights
  - C. Vehicle-mounted generator
  - D. Apparatus electrical system
- \_\_\_\_\_ 4. Which of the following BEST describes a limitation of fixed lights? (481)
- A. Noisy when equipped with separate engine
  - B. Constant exhaust and limited power supply
  - C. Number of units limited by location on scene
  - D. Number of units limited by amount of power produced by generator
- \_\_\_\_\_ 5. Which of the following auxiliary electrical equipment provides multiple outlets through one inlet? (484)
- A. Junction boxes
  - B. Electrical cables
  - C. Adapter connections
  - D. Twist-lock receptacles
- \_\_\_\_\_ 6. Which of the following auxiliary electrical equipment can allow mutual aid departments to operate off each other's generators? (484)
- A. Junction boxes
  - B. Electrical cables
  - C. Adapter connections
  - D. Twist-lock receptacles

## Multiple Choice

Write the letter of the best answer on the blank provided.

- \_\_\_\_\_ 1. Which of the following BEST describes the result of starting a generator while under load? (485)
- A. May contaminate fuel
  - B. Can damage electrical system
  - C. Will overheat and damage generator
  - D. Allows equipment to warm up before use
- \_\_\_\_\_ 2. Which of the following BEST describes how to prevent overloading when testing lighting equipment? (485)
- A. Document maintenance correctly
  - B. Discard faulty bulbs in approved manner
  - C. Shut off the power and allow bulbs to cool
  - D. Connect each light to the generator one light at a time
- \_\_\_\_\_ 3. Which of the following uses of rescue tools includes tools that ensure vehicle and structural members will not move during rescue? (486)
- A. Lifting
  - B. Pulling
  - C. Cutting
  - D. Stabilizing
- \_\_\_\_\_ 4. Which rescue tool power source may be less powerful than the others? (487)
- A. Electric
  - B. Manual
  - C. Hydraulic
  - D. Pneumatic
- \_\_\_\_\_ 5. Which rescue tool source is powered by compressed air cylinders? (488)
- A. Electric
  - B. Manual
  - C. Hydraulic
  - D. Pneumatic
- \_\_\_\_\_ 6. Which hydraulic/electric tool has an opening force that is twice as powerful as its closing force? (490)
- A. Shears
  - B. Spreaders
  - C. Extension ram
  - D. Combination shears/spreader

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- \_\_\_\_\_ 7. What group of rescue tools are typically power saws? (491)
- A. Cutting tools
  - B. Pulling tools
  - C. Manual rescue tools
  - D. Powered rescue tools
- \_\_\_\_\_ 8. What type of jack uses a threaded stem/component system? (493)
- A. Screw jack
  - B. Buttress jack
  - C. Hydraulic jack
  - D. Ratchet-lever jack
- \_\_\_\_\_ 9. Which of the following types of jacks is prone to failure under heavy loads? (494)
- A. Screw jack
  - B. Hydraulic jack
  - C. Trench screw jack
  - D. Ratchet-lever jack
- \_\_\_\_\_ 10. Which of the following BEST describes to what percentage wheel chocks can hold a vehicle in place on a grade? (495)
- A. 5 to 10 percent
  - B. 10 to 15 percent
  - C. 15 to 20 percent
  - D. 25 to 30 percent
- \_\_\_\_\_ 11. Cribbing materials are painted on the ends to indicate: (496)
- A. length of cribbing.
  - B. strength of cribbing.
  - C. when to replace cribbing.
  - D. times cribbing has been used.
- \_\_\_\_\_ 12. Which of the following rescue tools gives rescuers the ability to lift or displace an object that cannot be lifted by other equipment? (496)
- A. Impact tools
  - B. Come-alongs
  - C. Pneumatic nailers
  - D. Pneumatic lifting bags
- \_\_\_\_\_ 13. In what order should stacked lifting bags be inflated? (498)
- A. There is no specific order
  - B. The order determined by local SOPs
  - C. Top bag first, then smaller bags as needed
  - D. Bottom bag first, with smaller bags on top

- \_\_\_\_\_ 14. Which of the following is an advantage of synthetic fiber cable? (500)
- A. Floats on water
  - B. Heavy and rigid
  - C. Durable and long lasting
  - D. Affected by temperatures
- \_\_\_\_\_ 15. The load capacity of a come-along ranges from: (502)
- A. 1 to 10 tons (0.9 t to 9.1 t).
  - B. 10 to 12 tons (9.1 t to 10.8 t).
  - C. 14 to 20 tons (12.6 t to 18 t).
  - D. 20 to 22 tons (18 t to 19.8 t).
- \_\_\_\_\_ 16. What rescue tool consists of a square drive onto which a socket is attached? (502)
- A. Impact tool
  - B. Come-along
  - C. Pneumatic nailer
  - D. Pneumatic lifting bag
- \_\_\_\_\_ 17. Which of the following rescue tool maintenance tasks BEST describes how firefighters can mitigate the problem of fuel separating or degrading over time? (504)
- A. Check all fluid levels
  - B. Make sure that fuel is fresh
  - C. Check all electrical components
  - D. Make sure all protective guards are in place
- \_\_\_\_\_ 18. Which of the following BEST describes a benefit of scene size-up? (504)
- A. Identifies potential hazards
  - B. Controls traffic flow around scene
  - C. Establishes work zones for personnel
  - D. Reduces risks by following safety procedures
- \_\_\_\_\_ 19. Which of the following vehicle extrication hazards can be mitigated by parking apparatus to form a barrier between scene and ongoing traffic? (505)
- A. Fire
  - B. Traffic
  - C. Sharp objects
  - D. Blood borne pathogens
- \_\_\_\_\_ 20. Which of the following fire hazards present during vehicle extrication is MOST commonly found in a vehicle's trunk and interior? (506)
- A. Vehicle batteries
  - B. Downed power lines
  - C. Energy-absorbing struts
  - D. Flammable adhesives and liquids

- \_\_\_\_\_ 21. Which of the following hazards requires proper protective measures be taken to avoid contact with bodily fluids? (507)
- A. Fire
  - B. Sharp objects
  - C. Bloodborne pathogens
  - D. Environmental conditions
- \_\_\_\_\_ 22. What type of vehicle is powered by multiple propulsion systems? (508)
- A. Electric vehicles
  - B. Hydraulic vehicles
  - C. Hybrid electric vehicles
  - D. Conventional fuel vehicles
- \_\_\_\_\_ 23. What color is used to code the wiring of a 36-volt system on a Saturn? (510)
- A. Red
  - B. Blue
  - C. Green
  - D. Orange
- \_\_\_\_\_ 24. Which of the following duties is part of assessing the entire scene at a vehicle extrication incident? (511)
- A. Check for victims ejected from vehicles
  - B. Note any hazardous conditions on scene
  - C. Assess condition and position of vehicles
  - D. Determine extrication tasks that may be required
- \_\_\_\_\_ 25. When assessing the need for extrication, when should the information gathered be reported to the Incident Commander? (511)
- A. As each assessment is completed
  - B. After all assessments are completed
  - C. After a command structure is established
  - D. As the incident command post is established
- \_\_\_\_\_ 26. Which of the following extrication duties uses equipment to support key points between the vehicle and the ground? (513)
- A. Stabilizing the victim
  - B. Stabilizing the vehicle
  - C. Securing the electrical system
  - D. Securing passenger safety systems
- \_\_\_\_\_ 27. During vehicle extrication, where should chocks be placed if the vehicle is on an incline? (514)
- A. On the uphill side
  - B. On the downhill side
  - C. On both sides of the tires
  - D. On the side farthest from impact

- \_\_\_\_\_ 28. What may be necessary to use to ensure solid contact between cribbing and the vehicle during extrication? (515)
- A. Struts
  - B. Tripod
  - C. Tubing
  - D. Wedges
- \_\_\_\_\_ 29. What type of rescue equipment is used to gain access to the interior of a vehicle by lifting an object resting on the vehicle? (515)
- A. Lifting devices
  - B. Pulling devices
  - C. Stabilizing devices
  - D. Buttress tension system
- \_\_\_\_\_ 30. What type of stabilizing system uses a system of tubes and pins to spread the vehicle load during extrication? (516)
- A. Strut system
  - B. Jack system
  - C. Chain and rope system
  - D. Buttress tension system
- \_\_\_\_\_ 31. Which of the following should be done BEFORE shutting off the power when securing the electrical system in a vehicle? (517)
- A. Raise power windows
  - B. Lower power windows
  - C. Disconnect the battery
  - D. Cut the negative battery cable
- \_\_\_\_\_ 32. Firefighters should assume electric cars are always powered up even if they do not hear: (517)
- A. radio noise.
  - B. engine noise.
  - C. safety system noise.
  - D. vehicle battery noise.
- \_\_\_\_\_ 33. Which of the following color-coded cords should never be cut on an electric vehicle? (518)
- A. Red
  - B. Black
  - C. Green
  - D. Orange
- \_\_\_\_\_ 34. Which of the following must be disabled by cutting the connection between the sensors and control unit? (521)
- A. Head protection systems (HPS)
  - B. Side-impact protection system restraints (SIPS)
  - C. Extendable roll over protection systems (ROPS)
  - D. Supplemental passenger restraint systems (SPRS)

- \_\_\_\_\_ 35. Which of the following passenger safety and head protection systems must be punctured in order to be deflated? (521)
- A. Inflatable tubes
  - B. Window curtains
  - C. Side curtain air bags
  - D. Seat belt pretensioners
- \_\_\_\_\_ 36. Removing the \_\_\_\_\_ is no longer standard extrication practice as it can seriously weaken a vehicle's body, possibly causing collapse. (524)
- A. windshield
  - B. dashboard
  - C. side window
  - D. rear window
- \_\_\_\_\_ 37. Which of the following BEST describes where tempered glass is commonly used in vehicle windows? (525)
- A. Mirrors
  - B. Windshields
  - C. Side and rear windows
  - D. Windshields and side windows
- \_\_\_\_\_ 38. What tool can be used to open a completely stuck door? (526)
- A. Shears
  - B. Spreader
  - C. Impact tool
  - D. Come-along
- \_\_\_\_\_ 39. In what type of vehicle body construction can removing the roof and doors compromise structural integrity? (527)
- A. Unibody construction
  - B. Full frame construction
  - C. Rigid frame construction
  - D. Space frame construction
- \_\_\_\_\_ 40. Placing cribbing under the base of the A-post on a unibody vehicle when displacing the dashboard prevents: (530)
- A. the dashboard from collapsing.
  - B. the windshield from collapsing.
  - C. the windows from returning to original positions.
  - D. the dashboard from returning to its original position.
- \_\_\_\_\_ 41. Which of the following best describes the role of a Firefighter II during technical rescue operations? (531)
- A. Entering confined spaces for rescue
  - B. Performing specialized incident-related tasks
  - C. Assisting technical rescuers in incident-related tasks
  - D. Directing high angle urban/structural rescue operations

- \_\_\_\_\_ 42. What initial action may involve blocking traffic and shutting off utilities? (533)
- A. Size-up
  - B. Stabilize the situation
  - C. Establish scene security
  - D. Communicate information
- \_\_\_\_\_ 43. Which of the following personnel determines the location of the outer perimeter for scene security? (534)
- A. First officer on scene
  - B. Incident Commander
  - C. Accountability Officer
  - D. Firefighter II assigned to establish
- \_\_\_\_\_ 44. Which of the following BEST describes the personnel allowed in the warm zone during an incident? (534)
- A. Those personnel who are working the incident
  - B. Those directly involved in resolving the emergency
  - C. Those members of the general public watching the incident
  - D. Those directly supporting the personnel resolving the emergency
- \_\_\_\_\_ 45. What type of structural collapse pattern occurs when the outer walls of a structure remain intact and upper floors fail in the middle? (538)
- A. Lean-to collapse
  - B. Pancake collapse
  - C. V-shaped collapse
  - D. Cantilever collapse
- \_\_\_\_\_ 46. What type of collapse pattern is most vulnerable to a secondary collapse? (538)
- A. Lean-to collapse
  - B. Pancake collapse
  - C. V-shaped collapse
  - D. Cantilever collapse
- \_\_\_\_\_ 47. What type of technical rescue has environmental hazards that involve fire, darkness, and temperature extremes? (539)
- A. Mine rescue
  - B. Water rescue
  - C. Vehicle rescue
  - D. Structural collapse rescue
- \_\_\_\_\_ 48. Which of the following BEST describes the physical hazards found during a confined space rescue? (539)
- A. Limited means of entry and egress
  - B. Oxygen deficiency due to inadequate ventilation
  - C. Rescue must happen in rugged, inaccessible terrain
  - D. Hazard created by debris trapped against upstream face

- \_\_\_\_\_ 49. When using the OATH method of communication during confined space rescue, one tug represents: (540)
- A. O – ok.
  - B. H – help.
  - C. A – advance.
  - D. T – take-up slack.
- \_\_\_\_\_ 50. Which of the following duties can a firefighter perform if not trained in vehicle extrication? (540)
- A. Secure passenger safety systems
  - B. Pry open a completely stuck door
  - C. Assist by providing care to victims
  - D. Remove windows to gain access to victims
- \_\_\_\_\_ 51. Personal flotation devices (PFDs) are mandatory for all personnel working within \_\_\_\_\_ of the water's edge during water rescue. (541)
- A. 10 feet (3 m)
  - B. 15 feet (4.5 m)
  - C. 30 feet (9.1 m)
  - D. 35 feet (10.6 m)
- \_\_\_\_\_ 52. Which of the following BEST describes the hazards found at low-water dams? (542)
- A. Limited means of entry and egress
  - B. Oxygen deficiency due to inadequate ventilation
  - C. Rescue must happen in rugged, inaccessible terrain
  - D. Hazard created by debris trapped against upstream face
- \_\_\_\_\_ 53. What type of technical rescue requires keeping all nonessential personnel, bystanders, and heavy equipment back to prevent vibrations from causing secondary cave-ins? (543)
- A. Water rescue
  - B. Trench rescue
  - C. Vehicle rescue
  - D. Structural collapse rescue
- \_\_\_\_\_ 54. During trench rescue operations, ladders should extend at least \_\_\_\_\_ above the top of the trench. (543)
- A. 3 feet (1 m)
  - B. 8 feet (2.4 m)
  - C. 10 feet (3 m)
  - D. 15 feet (4.5 m)
- \_\_\_\_\_ 55. What type of device BEST fits the following characteristics: permanent, slower with large access doors and either manual or automatic controls? (545)
- A. Escalator
  - B. Freight elevator
  - C. Passenger elevator
  - D. Construction elevator

- \_\_\_\_\_ 56. The power unit for a hydraulic elevator operating system is located on the lower level of the building in a room within \_\_\_\_\_ of the elevator shaft. (546)
- A. 25 feet (8 m)
  - B. 50 feet (15 m)
  - C. 100 feet (30 m)
  - D. 110 feet (34 m)
- \_\_\_\_\_ 57. Which of the following personnel should be requested to start an escalator after a victim is removed? (547)
- A. Building manger
  - B. Escalator mechanic
  - C. Incident Commander
  - D. Accountability Officer
- \_\_\_\_\_ 58. What type of technical rescue involves physical hazards such as explosive atmospheres, cave-ins, and abandoned tools and equipment? (548)
- A. Ice rescue
  - B. Cave rescue
  - C. Mine rescue
  - D. Trench rescue
- \_\_\_\_\_ 59. The energized area around a wire in contact with the ground is called: (549)
- A. hot zone.
  - B. danger zone.
  - C. ground contact.
  - D. ground gradient.