**2016 Coal Mine Rescue Statements of Fact**

Practice Questions and Answers

1. To test for methane, use a methane detector or flame safety lamp. (Statement No. 1)

1. True
2. False\*

2. Carbon monoxide can be detected by means of carbon monoxide detectors, \_\_\_\_\_\_\_\_\_\_, or by chemical analysis. (Statement No. 2)

1. flame safety lamp
2. white mice
3. oxygen detectors
4. multi-gas detectors\*

3. Nitrogen dioxide is produced by \_\_\_\_\_\_\_\_\_\_ and by the detonation of explosives. (Statement No. 3)

1. incomplete combustion
2. complete combustion
3. breathing of miners and animals
4. burning\*

4. A mixture of coal dust in air increases the explosive limit of methane. (Statement No. 4)

1. True
2. False\*

5. \_\_\_\_\_\_\_\_\_\_ percent methane together with coal dust in air may be explosive. (Statement No. 5)

1. One to two
2. One and one-half to two\*
3. Five to fifteen
4. One to five

6. Mines above the water table tend to have more methane than those below the water table. (Statement No. 6)

1. True
2. False\*

7. After explosive gas is detected in a mine, rescue teams are usually needed to go into the mine to assess and re-establish ventilation. (Statement No. 7)

1. True
2. False\*

8. The range of concentrations within which a gas will explode are known as its "\_\_\_\_\_\_\_\_\_\_". (Statement No. 8)

1. explosive range\*
2. toxicity level
3. combustion level
4. danger zone

9. Any inflammable gas can explode under certain conditions. (Statement No. 9)

1. True
2. False\*

10. Combined firefighting methods allow firefighters to remain a safe distance from the fire. (Statement No. 10)

1. True
2. False\*

11. Temporary stoppings are built before permanent seals are erected in order to seal off a fire area as quickly as possible. (Statement No. 11)

1. True
2. False\*

12. In mines where head coal (roof coal) is \_\_\_\_\_\_\_\_\_\_, a fire will spread more rapidly. (Statement No. 12)

1. mined
2. left\*
3. laminated
4. eliminated

13. One hazard of heat during a fire is that it tends to weaken the roof, especially where head coal is left. (Statement No. 13)

1. True\*
2. False

14. Fires can be attacked by the use of a foam generator from a distance of \_\_\_\_\_\_\_\_\_\_ feet. (Statement No. 14)

1. 500-1,000
2. 1,000-1,500
3. 500-1,500\*
4. 1,000-2,000

15. It is generally recommended that teams not travel through toxic atmospheres. (Statement No. 15)

1. True
2. False\*

16. One method of direct firefighting is flooding the sealed fire area with water. (Statement No. 16)

1. True
2. False\*

17. Once an explosion has occurred, there is always the possibility of further explosions. (Statement No. 17)

1. True\*
2. False

18. Mine rescue teams may find it necessary to use air locks to sweep noxious or explosive gases from a face area. (Statement No. 18)

1. True
2. False\*

19. Once ventilation has been re-established and fresh air advanced, apparatus crews should continue the rehabilitation and cleanup effort. (Statement No. 19)

1. True
2. False\*

20. \_\_\_\_\_\_\_\_\_\_ are responsible for assessing damage to the ventilation system. (Statement No. 20)

1. MSHA inspectors
2. Rescue teams\*
3. Mine officials
4. Non-apparatus crews

21. Information the team relays to the fresh-air base as it proceeds is known as the “\_\_\_\_\_\_\_\_\_\_”. (Statement No. 21)

1. progress report\*
2. de-briefing
3. hourly update
4. preshift examination

22. It is the responsibility of \_\_\_\_\_\_\_\_\_\_ to have all the information needed to do the work. (Statement No. 22)

1. the fresh air base
2. the team captain
3. rescue team members\*
4. the command center

23. When a team locates a body, its location and position should be marked on a mine map and on the roof or rib close to the body. (Statement No. 23)

1. True\*
2. False

24. The fresh air base should regulate the team’s pace according to conditions encountered. (Statement No. 24)

1. True
2. False\*

25. When a body is first located, every effort should be made not to disturb any \_\_\_\_\_\_\_\_\_\_ in the area. (Statement No. 25)

1. ventilation controls
2. possible evidence\*
3. foot prints
4. personal articles

26. In situations too hazardous for teams to explore and reventilate safely, teams may be instructed to continue exploration. (Statement No. 26)

1. True
2. False\*

27. New mine rescue team members must have at least 20 hours of instruction on the breathing apparatus used by the team. (Statement No. 27)

1. True\*
2. False

28. Before the team leaves the fresh-air base to travel inby, the \_\_\_\_\_\_\_\_\_\_ should take note of the time of departure. (Statement No. 28)

1. map man
2. captain\*
3. fresh air base coordinator
4. team members

29. It is recommended that team checks be conducted every 20 minutes. (Statement No. 29)

1. True
2. False\*

30. It is recommended that the first stop for a team check be \_\_\_\_\_\_\_\_\_\_ the fresh-air base. (Statement No. 30)

1. near
2. just outby
3. just inby\*
4. within 20 feet of

31. For teams using a compressed oxygen breathing apparatus, the captain usually notes each team member’s gauge reading at each rest stop and reports the highest reading to the fresh air base. (Statement No. 31)

1. True
2. False\*

32. "Tying in" is the process by which you systematically explore all crosscuts and adjacent areas as you advance. (Statement No. 32)

1. True\*
2. False

33. As the team advances underground, the captain takes the lead. (Statement No. 33)

1. True\*
2. False

34. It is important that the team \_\_\_\_\_\_\_\_\_\_ its work so that it can return to the fresh air base on time. (Statement No. 34)

1. complete
2. finish
3. pace\*
4. quicken

35. As the team advances, the captain records what the team encounters by marking the information on a mine map. (Statement No. 35)

1. True
2. False\*

36. The \_\_\_\_\_\_\_\_\_\_ is responsible for choosing the exact sites within headings for building seals. (Statement No. 36)

1. captain
2. command center
3. team\*
4. map man

37. \_\_\_\_\_\_\_\_\_\_ causes a lack of orientation which may cause a team member to lose his/her sense of balance. (Statement No. 37)

1. Oxygen deficiency
2. Smoke\*
3. Low barometric pressure
4. Tying in

38. \_\_\_\_\_\_\_\_\_\_ fires involve flammable or combustible liquids. (Statement No. 38)

1. Class A
2. Class B\*
3. Class C
4. Class D

39. \_\_\_\_\_\_\_\_\_\_ fires involve combustible metals. (Statement No. 39)

1. Class A
2. Class B
3. Class C
4. Class D\*

40. Before using a hand held extinguisher it must be tested for the type of fire you are fighting. (Statement No. 40)

1. True
2. False\*

41. \_\_\_\_\_\_\_\_\_\_ is the ability of a gas to be dissolved in water. (Statement No. 41)

1. Dispersion
2. Solvablity
3. Solubility\*
4. Dissolvablity

42. Pools of water can release \_\_\_\_\_\_\_\_\_\_ gases into the air when they are stirred up. (Statement No. 42)

1. noxious and explosive
2. explosive
3. pungent
4. water soluble\*

43. High expansion foam is light and resilient and can travel long distances to a fire without breaking down. (Statement No. 43)

1. True\*
2. False

44. High expansion foam is very wet and heavy and can only be used when you’re close enough to a fire to force the foam directly onto the fire. (Statement No. 44)

1. True
2. False\*

45. \_\_\_\_\_\_\_\_\_\_ is explosive. (Statement No. 45)

1. Carbon dioxide
2. Carbon monoxide\*
3. Nitrogen dioxide
4. Nitrogen

46. Oxygen is a supporter of combustion. (Statement No. 46)

1. True\*
2. False

47. If smoke is so dense as to make visibility poor, you may need to keep in constant physical contact with a electrical cable, a compressed air or water line, or the rib in order to feel your way along. (Statement No. 47)

1. True
2. False\*

48. Two types of fire cannot be fought directly, fuel rich and spon com (spontaneous combustion), these will be extinguished only by remote controls. (Statement No. 48)

1. True\*
2. False

49. Mine recovery must not be compromised. Although "Time is never your friend", do not be in too great a hurry and do not permit others to hurry. (Statement No. 49)

1. True
2. False\*

50. Monitoring \_\_\_\_\_\_\_\_\_\_ helps determine what is the danger of explosion, how soon firefighters have to move to safety, how effective are the techniques being used and is the fire under control. (Statement No. 50)

1. pressures and temperature
2. methane and oxygen
3. pressures and gases\*
4. heat and oxygen

51. Sulfur dioxide and hydrogen are water soluble gases. (Statement No. 51)

1. True
2. False\*

52. Color, odor, and taste are physical properties that help to identify gases during \_\_\_\_\_\_\_\_\_\_. (Statement No. 52)

1. testing
2. barefaced exploration\*
3. sampling
4. chemical analysis

53. Only flame safety lamps and chemical analysis can positively identify a gas. (Statement No. 53)

1. True
2. False\*

54. The effects of toxic gases depend on the \_\_\_\_\_\_\_\_\_\_\_\_. (Statement No. 54)

1. weight, concentration, and exposure time
2. concentration, temperature, and toxicity
3. concentration, toxicity, and exposure time\*
4. specific gravity, explosive range, and concentration

55. Hydrocarbons are gases which cause suffocation or choking. (Statement No. 55)

1. True
2. False\*

56. \_\_\_\_\_\_\_\_\_\_ is a mixture of methane in air that will burn or explode when ignited. (Statement No. 56)

1. Whitedamp
2. Blackdamp
3. Firedamp\*
4. Stinkdamp

57. If there is a sufficient amount of oxygen in smoke, the smoke may be explosive. (Statement No. 57)

1. True
2. False\*

58. Ventilation controls are used underground to properly distribute air to all \_\_\_\_\_\_\_\_\_\_ of the mine. (Statement No. 58)

1. parts
2. areas
3. sections\*
4. active areas

59. Gases with specific gravities less than 1.0 tend to seek \_\_\_\_\_\_\_\_\_\_. (Statement No. 59)

1. high places\*
2. low places

60. Gases with specific gravities greater than 1.0 tend to seek low places. (Statement No. 60)

1. True\*
2. False

61. In order to maintain an airlock, one door of the airlock must be kept closed while the other is closed. (Statement No. 61)

1. True
2. False\*

62. Rescue teams should build a seal so that the two stoppings are erected as close together as possible yet with enough space to allow room for the team and their equipment to fit in between. (Statement No. 62)

1. True
2. False\*

63. If the fresh air base is on the surface, it should be located where it’s assured a fresh air travelway underground. (Statement No. 63)

1. True
2. False\*

64. The fresh air base should be located where it’s assured \_\_\_\_\_\_\_\_\_\_ ventilation and fresh air. (Statement No. 64)

1. indirect
2. positive\*
3. direct
4. negative

65. Elevators should be tested before use following an emergency. (Statement No. 65)

1. True
2. False\*

66. As a team advances, it is important to stay in close contact with the fresh air base/command center to report team progress and to receive further instructions. (Statement No. 66)

1. True\*
2. False

67. \_\_\_\_\_\_\_\_\_\_ is lighter than air. (Statement No. 67)

1. Carbon Dioxide
2. Oxygen
3. Methane\*
4. Hydrogen Sulfide

68. \_\_\_\_\_\_\_\_\_\_ has a specific gravity of one. (Statement No. 68)

1. Nitrogen
2. Nitrogen Dioxide
3. Carbon Monoxide
4. Normal air\*

69. Sufficient time should be allowed for a fire area to cool before it is sealed. (Statement No. 69)

1. True
2. False\*

70. Team captains should inspect roof and ribs before the team members advance into the area. (Statement No. 75)

1. True\*
2. False

71. The roof and ribs should be tested before extinguishing a fire. (Statement No. 71)

1. True\*
2. False

72. Hazardous areas should be marked to warn other teams that may enter the area after yours. (Statement No. 72)

1. True\*
2. False

73. Progress reports should include reports on roof and rib conditions and oxygen consumption. (Statement No. 73)

1. True
2. False\*

74. The time spent under oxygen by a rescue team is usually limited to \_\_\_\_\_\_\_\_\_\_ or less. (Statement No. 74)

1. one hour
2. two hours\*
3. three hours
4. four hours

75. When looking for survivors, it is important to look, listen and feel for clues. (Statement No. 75)

1. True
2. False\*

76. For a Class C fire (electrical), if power has been cut off to the burning equipment, it may be treated as a \_\_\_\_\_\_\_\_\_\_ fire. (Statement No. 76)

1. Class A
2. Class B
3. Class A or B\*
4. Class A or D

77. When survivors are located, their age, location, and vital signs should be reported immediately to the command center. (Statement No. 77)

1. True
2. False\*

78. When survivors are located, the location, time, and date should be marked on the team’s map and on the rib where they are found. (Statement No. 78)

1. True\*
2. False

79. When survivors are found, they should be transported to a medical facility as quickly as possible. (Statement No. 79)

1. True
2. False\*

80. The main objective of recovery work is to put the affected area of the mine back in operation as soon as possible. (Statement No. 80)

1. True\*
2. False

81. All \_\_\_\_\_\_\_\_\_\_ should be well hitched in the floor roof, and ribs to improve their strength. (Statement No. 81)

1. permanent stopping
2. temporary stoppings
3. temporary seals\*
4. permanent seals

82. Rock dust is an effective sealant when used around the perimeter of a seal. (Statement No. 82)

1. True
2. False\*

83. Low or medium volatile coal burns much faster than high volatile coal. (Statement No. 83)

1. True
2. False\*

84. It may be necessary to \_\_\_\_\_\_\_\_\_\_ the thickness of the material in order to improve the effectiveness of a temporary seal. (Statement No. 84)

1. double
2. triple
3. double or triple\*
4. quadruple

85. \_\_\_\_\_\_\_\_\_\_ should be built at locations with good roof and even roof and ribs. (Statement No. 85)

1. Permanent stoppings
2. Seals\*
3. Temporary stoppings
4. Airlocks

86. Hazards of indirect firefighting are electric shock or electrocution, toxic and asphyxiating gases, oxygen deficiency, explosive gases, heat, smoke and steam. (Statement No. 86)

1. True
2. False\*

87. When fires are sealed in gassy or dusty mines, a thick coating of rock dust should be applied to the ribs, roof and floor for several hundred feet outby the seals, and if possible, inside the seal, to reduce the chance of propagating a coal dust explosion. (Statement No. 87)

1. True\*
2. False

88. The first priority of exploration work during a mine fire are locating the fire and assessing conditions in the fire area. (Statement No. 88)

1. True
2. False\*

89. A self-contained breathing apparatus is a completely portable unit that supplies oxygen or air independently of the surrounding atmosphere. (Statement No. 89)

1. True\*
2. False

90. A smoke tube is used to show the direction and volume of slow moving air. (Statement No. 90)

1. True
2. False\*

91. If a team member must return to the fresh air base because of a problem, it is standard practice among teams for the entire team to go back with that person. No one should ever travel alone. (Statement No. 91)

1. True\*
2. False

92. Thermal imaging cameras should only be used in less than \_\_\_\_\_\_\_\_\_\_ of Methane. (Statement No. 92)

1. 0.5 percent
2. 1 percent\*
3. 1.5 percent
4. 2 percent

93. Once rescued, survivors can return to the surface. (Statement No. 93)

1. True
2. False\*

94. The lower explosive limit of hydrogen is \_\_\_\_\_\_\_\_\_\_. (Statement No. 94)

1. 4.0 percent\*
2. 4.5 percent
3. 5.0 percent
4. 12.5 percent

95. The IDLH of Nitrogen Dioxide is \_\_\_\_\_\_\_\_\_\_. (Statement No. 95)

1. 60 ppm
2. 50 ppm
3. 35 ppm
4. 20 ppm\*

96. Clean, dry air at sea level is made up of \_\_\_\_\_\_\_\_\_\_\_. (Statement No. 96)

1. 77 percent nitrogen and 21 percent oxygen
2. 78 percent nitrogen and 20 percent oxygen
3. 78 percent nitrogen and 21 percent oxygen\*
4. 80 percent nitrogen and 20 percent oxygen

97. After a fire has been sealed, the practice has been to wait \_\_\_\_\_\_\_\_\_\_ before making the initial visit to the seals. (Statement No. 97)

1. 72 hours\*
2. 48 hours
3. 36 hours
4. 24 hours

98. When appropriate, a fire area is not un-sealed until the oxygen content is low enough to make explosions impossible and the methane has disappeared. (Statement No. 98)

1. True
2. False\*

99. Firefighters force \_\_\_\_\_\_\_\_\_\_ into areas where they are trying to remove the oxygen leg of the fire triangle. (Statement No. 99)

1. flammable gases
2. combustible gases
3. inert gases\*
4. no gases

100. A team is a unit made up of \_\_\_\_\_\_\_\_\_\_ working toward a common goal. (Statement No. 100)

1. miners
2. team members
3. individuals\*
4. men and women