STATEMENTS OF FACT
MINE RESCUE

1. Under no circumstances will the team ever _____ ventilation without orders to do so from the Command Center. a. change b. alter c. move B

2. High temperatures (or heat) cause gases to expand, so they _____ more quickly.
a. dissipate b. disperse c. diffuse C

3. The Command Center considers several factors before it orders a change in ventilation, most importantly; it has to consider how the _____ will affect ventilation into an unexplored area. a. Changes b. alterations c. redistribution B

4. A dangerous and sometimes fatal mistake that responders make is entering an unsafe or _____ scene. a. dangerous b. hazardous c. life threatening B

5. With the airway open place your ear over the patient's nose and mouth, and watch for chest _____. a. to rise b. to fall c. movement C

6. If the patient is not breathing, check for a carotid pulse at the neck to _____ if blood is circulating. a. realize b. determine c. calculate

7. One of the first critical steps when fighting fire in a mine is to _____ water (preferably as fog) downstream (inby the fire) into the path of (as close as possible to) the oncoming flames.
a. spray b. squirt c. foam A

8. Stopping smoke _____is a must because if you cannot control the rollback you probably can't get close enough to fight the fire effectively. a. feedback b. rollback c. rollover B

9. Gas layering is like smoke _____ with Methane and Hydrogen the likely gases to form layers during a fire. a. feedback b. rollback c. rollover B

10.The IDLH of Carbon Dioxide is _____ ppm. a. 30,000 ppm b. 20,000 ppm c. 40,000 ppm. C

11.A smoke tube is used to show the direction and _____of slow moving air. a. movement b. volume c. velocity C

12.When taking a reading with an anemometer, a commonly used method is to traverse the a_____. a. entry b. crosscut c. airway C

13.An airlock consists of two doors or two stoppings with flaps or doors in them which are in close proximity to each other in the same _____. a. passageway b. airway c. entry A

14.The purpose of an airlock is to separate two different atmospheres while still _____miners to enter and exit without mixing the atmospheres. a. allowing b. permitting c. letting B

15.Temporary stoppings built in a crosscut should be placed at least four to six feet into the crosscut in order that _____ space is available to construct a permanent stopping. a. enough b.sufficient c. allowable B

16.“Pogo sticks” are _____ which may be used to erect temporary stoppings. a. items b. objects c. devices C

17.Oxygen is a supporter of _____. a. fire b. combustion c. breathing B

18.Temporary seals should include _____ for collecting air samples from within the sealed area. a. ways b. means c. provisions C

19.Progressive ventilation is the re-ventilation of a sealed area in _____blocks by means of airlocks. a. completed b. successive c. direct

20._____ ventilation is the re-ventilation of an entire sealed area at once. a. direct b. progressive c. indirect A

21._____time should be allowed for a fire area to cool before it is unsealed. a. sufficient b. enough c. short A

22.Normal air has a specific _____of one. a. weight b. gravity c. mass B

23.Besides helping you determine where to test for a gas, specific _____ also indicates how quickly the gas will diffuse and how easily it can be dispersed by ventilation. a. weight b. gravity c. mass B

24_____ is lighter than air. a. methane b. oxygen c. carbon dioxide A

25.Carbon monoxide is _____. a. inert b. explosive c. non-toxic B

26.The _____ of concentrations within which a gas will explode is known as its “explosive range.” a. range b. mass c. area A

27.Nitrogen dioxide has a reddish-brown color in high _____ a. amounts b. volumes c. concentrations C

28.Color, odor, and taste are physical properties that can help you _____ a gas, especially during barefaced exploration a. analyze b. capture c. identify C

29.Clean, _____ air at sea level is made up of 78 percent nitrogen and 21 percent oxygen a. normal b. dry c. pure B

30.Oxygen has no _____. a. weight b. mass c. odor C

31.Hydrogen sulfide has an odor _____ to rotten eggs a. likened b. similar c. resembling B

32.The explosive range of methane in air is 5 to 15 _____. a. percent b. percent volume c. volume percent C

33.When present in high concentrations (2 percent or higher), carbon dioxide causes you to breathe deeper and _____ a. quicker b. slower c. faster C

34.Carbon monoxide can be _____ by means of carbon monoxide detectors, multi-gas detectors, or by chemical analysis a. found b. analyzed c. detected C

35.The lower explosive limit of hydrogen is _____ percent a. 4.0% b. 4.3% 4.5% A

36.Hydrogen sulfide is flammable and explosive in concentrations from_____ to 45.5 percent in normal air a. 4.5% b. 4.3% c. 4.0% B

37.Carbon dioxide is _____ a. tasteless b. explosive c. non-explosive

38.Air containing 4 to 74.2 percent hydrogen will explode even when there is as little as ____ oxygen present a. 5% b.10% c. 12.1% A

39.A mixture containing as little as _____to 2 percent methane, together with coal dust, may be explosive a. 1 b. 1 ½ c. .5% B

40.Nitrogen is an asphyxiant in above normal _____ a. concentrations b. amounts c. layers A

41.The IDLH of Hydrogen sulfide and Sulfur Dioxide is _____ppm a. 100 b. 200 c. 300 A

42.The IDLH of Nitrogen Dioxide is _____ppm a. 20 b. 30 c. 50 A

43.The affinity of carbon monoxide for hemoglobin is _____to _____ times that of oxygen a. 100/200 b.200/300 c. 100/300 B

44.Carbon Dioxide is the product of oxidation including the decay of _____ a. coal b. pipes c. timbers

45._____ 21 percent of normal air is oxygen a. Almost b. Exactly c. About C

46._____is a mixture of carbon monoxide, carbon dioxide, methane, oxygen, nitrogen and hydrogen a. firedamp b. whitedamp c. aftrerdamp C

47 _____is usually found after a mine fire or explosion a. firedamp b. afterdamp c. whitedamp B

48.Hydrogen can be detected with a multi-gas _____ or by chemical analysis a. spotter b. detector c. tube B

49.In some mines, carbon dioxide is liberated from the _____ strata a. coal b. bottom c. rock C

50.To detect oxygen deficient atmospheres teams will use an _____ a. flame safety lamp b. multi-gas detector c. oxygen indicator C

51.To _____ for methane, use a methane detector or chemical analysis. a. test b. analyze c. detect d. check A

52.Because fire _____ such large quantities of oxygen, there is a hazard of oxygen-deficient air in the mine. a. uses b. absorbs c. consumes d. liberates C

53.Nitrogen dioxide is _____by burning and by the detonation of explosives. a. made b. produced c. developed B

54.A mixture of coal dust in air reduces the explosive l_____ of methane. a. amount b. srange c. limit C

55.If the mine has had _____, the team may encounter a great deal of debris, damage to stoppings, and hazardous roof and rib conditions. a. an explosion b. an ignition c. a rock bump A

56.Mines below the water table _____ to have more methane than those above the water table. a. seem b. are known c. tend C

57.After a fire or explosion in a mine, rescue teams are usually needed to go into the mine to assess and _____ventilation. a. establish b. reestablish c. reconstruct B

58.When the fresh air base is set up underground, an air lock must be built to isolate the fresh air base from the unexplored area _____ it. a. around b. behind c. beyond C

59.Any flammable gas can _____ under certain conditions. a. ignite b. burn c. explode C

60.Indirect firefighting _____ allow firefighters to remain a safe distance from the fire. a. actions b. training c. methods C

61.Temporary seals are built before permanent seals are _____ in order to seal off a fire area as quickly as possible. a. built b. constructed c. erected C

62.In mines where head coal (roof coal) is left, a fire will spread more _____. a. quickly b. rapidly c. easily B

63.One _____ of heat during a fire is that it tends to weaken the roof, especially where head coal is left. a. danger b. hazard c. disaster B

64.Fires can be attacked by the use of a foam generator from a distance of _____-_____feet. a. 500- 1000 b. 1000-1500 c. 500-1500 C

65. It is generally recommended that teams not _____through foam filled areas. a. travel b. walk c. explore A

66.One method of _____ firefighting is flooding the sealed fire area with water. a. direct b. indirect c. safely d. indirect B

67.Once an explosion has _____, there is always the possibility of further explosions. a. happened b. started c. occurred C

68.Mine rescue teams may find it necessary to use line brattice to sweep _____ or explosive gases from a face area. a. harmful b. noxious c. toxic B

69.Once ventilation has been re-established and fresh air advanced non-apparatus _____ can take over the rehabilitation and cleanup effort. a. teams b. groups c. crews C

70.Rescue teams are responsible for assessing _____ to the ventilation system. a. problems b. conditions c. damage C

71.Information the team relays to the fresh-air base as it _____ is known as the “progress report”. a. explores b. proceeds c. travels B

72.It is the responsibility of rescue team members to have all the _____ needed to do the work. a. equipment b. supplies c. information C

73.When a team _____ a body, its location and position should be marked on a mine map and on the roof or rib close to the body. a. finds b. discovers c. locates C

74.The rescue team captain should regulate the team’s _____ according to conditions encountered. a. pace b. work c. speed A

75.When a body is _____ located, every effort should be made not to disturb any possible evidence in the area. a. initially b. first c. eventually B

76.In situations too _____ for teams to explore and reventilate safely, teams may be instructed to seal the area. a. dangerous b. unsafe c. hazardous C

77.New mine rescue team members must have at least 20 hours of _____ on the breathing apparatus used by the team. a. training b. instruction c. teaching B

78.Before the team leaves the fresh-air base to _____ inby, the captain should take note of the time of departure. a. explore b. travel c. advance B

79.It is _____ that team checks be conducted every 15 to 20 minutes. a. required b. recommended c. mandatory B

80.It is recommended that the first stop for a _____ check be just inby the fresh-air base. a. team b. rescue team c. mine rescue team A

81.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 lowest _____ to the fresh-air base. a. number b. person's c. reading C

82."Tying in" is the process by which you systematically explore all crosscuts and adjacent areas as you _____. a. explore b. travel c. advance C

83.As the _____advances underground, the captain takes the lead. a. team b. rescue team c. mine rescue team A

84.It is important that the team _____ its work so that it can return to the fresh air base on time. a. regulate b. pace c. control B

85.As the team advances, the map man records what the team _____ by marking the information on a mine map. a. encounters b. locates c. discovers A

86.The team is responsible for choosing the exact sites within headings for _____ seals. a. building b. constructing c. erecting A

87.Smoke causes a lack of orientation which may cause a team member to lose his/her sense of _____. a. direction b. orientation c. balance C

88.Class B fires _____ flammable or combustible liquids. a. involve b. combine c. unite A

89.Class D fires _____ combustible metals. a. involve b. combine c. unite A

90.Before using a hand held _____ it must be checked for the type of fire you are fighting. a. fire extinguisher b. extinguisher c. ABC extinguisher B

91.Solubility is the _____of a gas to be dissolved in water. a. method b. ability c. process B

92.Pools of water can release water soluble gases into the air when they are _____ up. a. mixed b. stirred c. shaken B

93.High expansion foam is light and resilient and can travel long distances to a fire without breaking _____ a. up b. apart c. down C

94.Low expansion foam is very wet and heavy and can only be used when you're _____ enough to a fire to force the foam directly onto the fire. a. near b. close c. up B

95.Take the carotid pulse for _____ seconds. a. 5-10 b. 10-15 c. 5-15 A

96.Blood that is bright red and spurting may be coming from an _____ a. artery b. vein c. capillary A

97.Most cases of external bleeding can be controlled by applying direct pressure to the _____ of the wound. a. site b. area c. location A

98.Two types of fire cannot be fought directly, fuel rich and spon com (spontaneous combustion), these will be extinguished _____ by remote controls. a. only b. always c. frequently A

99.Team safety must not be compromised. Although "Time is never your _____" do not be in too great a hurry and do not permit others to hurry. a. enemy b. ally c. friend C

100._____pressures and gases 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. a. Checking b. Testing c. Monitoring C