

## New Iberia 2017 Mine Rescue Contest

### Field Written Test

1. An example of a low or third priority condition in first degree burns of less than 25% of the body including hands or feet but not face.
  - a. True
  - b. False
2. If you locate a survivor who is acting irrationally, you will want to calm him and avoid restraints to lessen the chance of any post-traumatic stress.
  - a. True
  - b. False
3. A fresh air base is always established at a point where conditions no longer permit barefaced exploration.
  - a. True
  - b. False
4. Very violent explosions are possible when air contains more than .7 to .8% hydrogen.
  - a. True
  - b. False
5. A body will always remain underwater when the water is cold.
  - a. True
  - b. False
6. When a team locates a body, the proper procedure is to D&I it and rush on looking for live survivors.
  - a. True
  - b. False
7. Carbon Monoxide is extremely toxic only in high concentrations.
  - a. True
  - b. False
8. Re-ventilation after an explosion in a multi-level, room-and-pillar mine is always accomplished by progressive ventilation.
  - a. True
  - b. False
9. In a mine SO<sub>2</sub> seeks low places and can burn and or explode.
  - a. True
  - b. False
10. H<sub>2</sub>S has an explosive range of 4.5 to 40% in normal air.
  - a. True
  - b. False

11. Exposure to as little as 1.0 to 2.0% of H<sub>2</sub>S can cause severe bronchitis or pneumonia.
  - a. True
  - b. False
12. C<sub>4</sub>H<sub>10</sub> has an explosive range of 2.86 to 9.41% in normal air
  - a. True
  - b. False
13. If a survivor is found and showed no signs of hysteria or obvious injuries and decides to bolt for safety and head to the surface, the team should move on looking for other survivors.
  - a. True
  - b. False
14. It is mine rescue protocol to have an emergency medical technician (EMT) on every team since he or she has the training to determine the extent of injuries, especially if there are several individuals injured.
  - a. True
  - b. False
15. Bulkheads or used to direct and stop air and stoppings are used to prevent intake air from short-circuiting the ventilation system. They are not inner changeable.
  - a. True
  - b. False
16. Based on the law of physics the two basic methods for unsealing a fire area are progressive and indirect ventilation.
  - a. True
  - b. False
17. In order to get the air to flow from the intake to the exhaust entries, the intake air must be at a lower pressure than the exhaust.
  - a. True
  - b. False
18. During a recovery using progressive ventilation, the sealed area is explored and re-ventilated in successive blocks by the use of air regulators. The main disadvantage of progressive ventilation is that it is a slow process.
  - a. True
  - b. False

19. It is important to establish a clear chain-of-command so that rescue and recovery work can be well coordinated. Thus, the team is under the direct supervision of the command center.
- True
  - False
20. When establishing an area for a fresh air base the three most important things are, the area should be free of oil and grease, large enough to accommodate all of the people using it, and isolated from any stray or direct current.
- True
  - False
21. In the fire triangle, each leg of the triangle is labeled with one of the elements necessary for a fire: fuel, oxygen or heat. Smothering a fire with noncombustible materials removes the \_\_\_\_\_.
- Fuel
  - Oxygen
  - Heat
  - All of the above
22. Water can also be used to put out fires. Water acts to cool the fire, removing heat from the fire triangle. Water is an effective extinguishing agent \_\_\_\_\_ fires.
- Class A
  - Class A&B
  - Class A,B&C
  - Class A,B,C &D
23. The "rule of thumb" when altering ventilation is not to change the ventilation \_\_\_\_\_.
- Without direct orders from the command center
  - Into an unexplored area
  - By simply reversing the main fan
  - All of the Above.
24. Which of the following is not true for CO?
- It is an explosive and flammable gas
  - It is highly toxic and its poisoning effects are cumulative over time
  - It is lighter than air and can be measured using a portable detector at chest level
  - It is a product of the complete combustion of any carbon material

25. When a mine is sealed off for any length of time, water can collect in it. Pools of water can release \_\_\_\_\_ gases into the air when they are stirred up.
- Water-soluble
  - Explosive and non-explosive
  - Poisonous and toxic
  - All of the above
26. Determining the exact time to unseal a fire area is based on the laws of physics and chemistry, as well as on experience and sound judgement. The main factors governing the time for unsealing a fire area include:
- Extent and intensity of fire at the time of sealing
  - Gas conditions as indicated by analysis of air samples taken in front of the seals
  - Location of the fire area with respect to ventilation
  - Both A and C
27. All decisions concerning the mine rescue teams (scheduling, assignments, tracking, rotations, and methods of exploration or firefighting) are made by the \_\_\_\_\_.
- Mine superintendent
  - MSHA district manager
  - Command center
  - Fresh air base coordinator
28. Any flammable gas can explode if \_\_\_\_\_.
- There is enough of the gas present in the air
  - There is enough oxygen present in the air / gas mixture
  - There is an ignition source in the area
  - A, B and C must be present at the same time
29. High expansion foam is used mainly to contain and control fire by removing \_\_\_\_\_ and \_\_\_\_\_.
- Oxygen and fuel
  - Heat and oxygen
  - Fuel and heat
  - None of the above
30. The volume of a gas changes in response to any change in \_\_\_\_\_.
- The ventilating air currents in the mine
  - Its specific gravity
  - Atmospheric pressure or temperature
  - All of the Above