Southern Regional Mine Rescue Contest

New Iberia, LA

May 7-9, 2013

**WRITTEN TEST**

Company Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Team Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Your Team Position\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Your Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Discounts\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Clean dry air at sea level is made up of 78 percent carbon dioxide.
   1. True
   2. False
2. Which of the following are true?
   1. Air is about 21 percent oxygen
   2. A 15 percent oxygen concentration will cause dizziness and headaches
   3. Both a) and b) are true
   4. Neither a) nor b) is true.
3. Nitrogen is not an explosive gas but it can burn.
   1. True
   2. False
4. Which of the following is not true?
   1. Carbon dioxide is soluble in water
   2. Carbon dioxide will collect near the floor
   3. Carbon dioxide will burn but not explode
   4. None of the above
5. The first symptom of carbon monoxide poisoning is a slight tightening across your forehead and possibly a headache.
   1. True
   2. False
6. Oxides of nitrogen are highly toxic. Breathing even small amounts will cause irritable bowel syndrome.
   1. True
   2. False
7. When should you test for hydrogen sulfide?
   1. In poorly ventilated areas of the mine
   2. During unsealing operations
   3. Following mine fires
   4. All of the above
8. Because of its low specific gravity, sulfur dioxide is hard to disperse by ventilation.
   1. True
   2. False
9. Which of the following is the specific gravity of methane?
   1. 0.5545
   2. 0.0554
   3. 0.0055
   4. 0.0005
10. Acetylene has which following characteristics?
    1. Garlic color
    2. Sweet taste
    3. Rotten egg smell
    4. None of the above
11. Who maintains a point-of-contact between the Command Center Group and other concerned parties?
    1. Team captain
    2. Team trainer
    3. Liaison function
    4. Any of the above
12. The (mine rescue) team is under the direct supervision of whom?
    1. Team captain
    2. Mine superintendent
    3. MSHA
    4. None of the above
13. Natural ventilation is one of two methods of ventilating a mine. The other method is \_\_\_\_\_\_\_\_\_\_\_ ventilation?
    1. Unnatural
    2. Mechanical
    3. Forced
    4. Exhaust
14. Bulkhead and overcast are two different terms for the same ventilation control.
    1. True
    2. False
15. Mine doors are always hung so that the air pressure will push them open.
    1. True
    2. False
16. Barefaced exploration should be conducted only when the ventilation system is operating properly.
    1. True
    2. False
17. Some factors to consider when you select a site for a fresh air base include?
    1. It’s assured positive ventilation and fresh air
    2. When UG, it’s assure a positive fresh air travelway to the surface
    3. It can be linked to the surface by a communication system
    4. All of the above
18. As you explore the mine, which of the following is true?
    1. Your first priority is team safety
    2. The rescue of survivors comes second
    3. Your third priority is the recovery of the mine
    4. All of the above
19. Dry chemical extinguishers put out fires by stopping the chemical reaction between the fuel and oxygen.
    1. True
    2. False
20. Water is an effective extinguishing agent for all classes of fires.
    1. True
    2. False
21. Hazards to the team while fighting an underground fire include?
    1. Heat
    2. Smoke
    3. Steam
    4. All of the above
22. Which of the following is not an indication that an underground explosion may have occurred?
    1. The presence of afterdamp
    2. Blown out timbers and bulkheads
    3. Oxygen levels in excess of 21 percent
    4. Ground falls
23. When you have located survivors in a refuge chamber or barricade, you should not try to establish communication with them as soon as possible.
    1. True
    2. False
24. The sorting of victims is commonly referred to as a “triangle” system.
    1. True
    2. False
25. Psychologically, when survivors are found, their behavior may range from apprehension to uncontrollable hysteria.
    1. True
    2. False
26. Determining the exact time to unseal a fire is based on the laws of physics and chemistry, as well as on experience and sound judgment.
    1. True
    2. False
27. Which of the following are basic methods of unsealing a fire?
    1. Progressive, or stage, ventilation
    2. Direct ventilation
    3. Both a) and b)
    4. None of the above
28. The objectives of reestablishing ventilation after an explosion (without propagating another explosion) include?
    1. Rid the mine of potentially explosive gases
    2. Restore normal ventilation
    3. Restore normal amounts of oxygen to all workings
    4. All of the above
29. Fires, explosions, and other disasters seldom result in weakened ground conditions.
    1. True
    2. False
30. The Command Center is the hub of rescue and recovery operations and is typically staffed and controlled by a mine emergency “command group.” This group is generally comprised of mine management, federal and state officials, and union representatives.
    1. True
    2. False