

Southern Regional Mine Rescue Contest
New Iberia, LA
May 6-8, 2014
Written Test – Field Competition

Name _____ Company _____

Team Name _____ Contest Position No. _____

Team Member No. _____

Directions: Use answer sheet & fill in completely.

1. During a rescue and recovery operation, the only duty of the outside Supervisor is to set up an area where food and drinks are available for the rescue teams and other personnel.
 - a. True
 - b. False

2. The explosive range of Ethane in normal air is?
 - a. 2.12 – 9.35%
 - b. 3.0 – 12.5%
 - c. 2.5 – 9.35%
 - d. None of the above

3. Reestablishing ventilation and bringing fresh air to an area damaged by fire or explosion is the main task of mine rescue teams in a rescue operation.
 - a. True
 - b. False

4. The law requires that gas detectors be able to measure concentrations of methane from 0.0 to 100% of volume, oxygen from 0.0 to 20% of volume, and carbon monoxide from 0.0 to 9,999 ppm.
 - a. True
 - b. False

5. Air locking operations should never be undertaken until the oxygen content of the air behind the seals has been reduced to at least _____%.
 - a. 2.0%
 - b. .05%
 - c. 1%
 - d. 5.0%

6. Urethane foam should never be applied greater than 1 ½ inch thick because of spontaneous combustion.
 - a. True
 - b. False

7. You can allow a rescued miner to walk out of the mine alone if the miner appears to be in good shape?
 - a. True
 - b. False
8. Usually, after temporary seals are erected, a waiting period of about 72 hours is recommended before beginning construction on permanent seals?
 - a. True
 - b. False
9. When constructing a temporary bulkhead from a crosscut, the bulkhead should be ____ feet into the passageway?
 - a. 10 to 12
 - b. 1 to 2
 - c. 4 to 6
 - d. None of the above.
10. The smoke tube is a device that emits a smoke cloud which floats along with the air current to show the quantity of the airflow and the approximate velocity of the airflow.
 - a. True
 - b. False
11. If you are exposed to high concentrations of CO, you may experience very few symptoms before losing consciousness.
 - a. True
 - b. False
12. Carbon Dioxide is colorless and odorless, but high concentrations may produce an acid taste.
 - a. True
 - b. False
13. _____ is found after methane explosions in air having low oxygen content?
 - a. Butane
 - b. Ethane
 - c. Acetylene
 - d. Argon
14. The debriefing session is a very important aspect of your team's body recovery operation.
 - a. True
 - b. False
15. Heavier gases such as carbon dioxide and sulfur dioxide do not diffuse rapidly, so they're easier to disperse?
 - a. True
 - b. False
16. The degree to which a toxic gas will affect you depends on three factors: 1) how concentrated the gas is 2) how explosive the gas is and 3) how long you're exposed to the gas?
 - a. True
 - b. False

17. _____ are spring-loaded expandable metal rods that can be used to erect a temporary stopping.
- Curtain rods
 - Post sticks
 - Stopping rods
 - Pogo sticks
18. Oxides of nitrogen are highly toxic. Breathing even small amounts will cause irritable bowel syndrome.
- True
 - False
19. A line brattice is brattice cloth or plastic that is hung to channel intake air into a working area that otherwise would not have adequate ventilation.
- True
 - False
20. The purpose of a permanent stopping is to separate two different atmospheres while still permitting miners to enter and exit without mixing the atmospheres.
- True
 - False
21. The team briefing is normally conducted:
- Only at a mine rescue contest
 - At the fresh air base
 - Command Center
 - None of the above
22. Rock –Strata gases commonly called “rock gas” is assumed to contain what two types of gasses?
- Hydrogen and Carbon Monoxide
 - Nitrogen and Sulfur Dioxide
 - Nitrogen and Carbon Dioxide
 - Hydrogen Sulfide and Hydrogen
23. Normally gasses stratify when the ventilation system in a mine is working properly.
- True
 - False
24. In a multi-level mine, a tunnel driven perpendicular to the main vein system of the mine is considered a?
- Drift
 - Stope
 - Crosscut
 - None of the above

25. Another source of nitrogen in underground mines is the detonation of explosives.
- True
 - False
26. Before using indirect ventilation, there should be conclusive evidence that the fire has been extinguished.
- True
 - False
27. The advantage of progressive ventilation is it is a fast process.
- True
 - False
28. Bulkheads are used to direct air to where it is needed and to keep intake air from short-circuiting to the exhaust before it reaches the working area.
- True
 - False
29. A fresh air base is usually established at a point where conditions no longer permit barefaced exploration.
- True
 - False
30. Check curtains are designed to close automatically after you have passed through them so that they continue to direct air to the working place.
- True
 - False