

Missouri Mine Rescue Contest
Rolla, MO
October 3 – October 6, 2016
Written Test – Field Competition

1. While exploring and preparing an area for re-ventilation, teams should be on alert for and eliminate any possible source of ignition.
 - a. True (Module pg. 7-11)
 - b. False
2. During recovery the _____ will determine when conditions appear safe to reenter the mine.
 - a. Mine Manager
 - b. Command Center (Modules 7-10)
 - c. Team Trainer
 - d. Gas Man
3. Butane has an explosive range of 1.86 to 8.41 percent in normal air.
 - a. True (Modules 2-23)
 - b. False
4. The specific gravity for Propane is _____.
 - a. 1.0625
 - b. 1.5265
 - c. 1.5625 (Modules 2-23)
 - d. 1.0526
5. Ethane is not a Heavy Hydrocarbon.
 - a. True
 - b. False (Modules 2-23)
6. In certain concentrations propane and ethane may produce a characteristic “gassy” odor.
 - a. True
 - b. False (Modules 2-23)
7. 0.5545 is the specific gravity of Methane.
 - a. True (Modules 2-22)
 - b. False
8. Exposure to .10 to .20% or more of Hydrogen Sulfide can cause rapid death.
 - a. True (Modules 2-61)
 - b. False
9. Hydrogen has an explosive range of 4.0 to 74.2% in air with as little as 8% oxygen.
 - a. True
 - b. False (Modules 2-59)
10. The specific gravity for Nitrogen Dioxide is:
 - a. 1.5894 (Modules 2-57)
 - b. 1.8459
 - c. 1.5984
 - d. None of the above
11. _____ is a mixture of methane and air that will burn or explode when ignited.
 - a. Blackdamp
 - b. Stinkdamp
 - c. Firedamp (Modules 2-27)
 - d. Afterdamp
12. “Damps” are the names early miners gave to mixtures of gases?
 - a. True (Modules 2-26)
 - b. False

13. Because the command center must make their decisions based on what you see, it is extremely important that you assess the ventilation accurately.
 - a. True (Modules 3-3)
 - b. False
14. The only natural energy source that can create and sustain an adequate airflow is kinetic energy due to temperature difference.
 - a. True
 - b. False (Modules 3-5)
15. Reestablishing ventilation and bringing fresh air to an area damaged by fire or explosion is the main task of mine rescue teams in an exploration operation.
 - a. True
 - b. False (Modules 7-4)
16. After a fire, explosion, or flood in a mine, rescue teams are usually needed to go into the mine to assess and reestablish _____.
 - a. Production
 - b. Electrical Power
 - c. Ventilation (Modules 3-3)
 - d. Ground Control
17. The mine fan(s) can create pressure differential either by exhausting air into the mine or blowing air from the mine.
 - a. True
 - b. False
18. If a body is in cold water, it will remain in almost perfect condition for 3 or 4 days.
 - a. True
 - b. False (Modules 6-10)
19. Blower fans are used mostly in mines having a lot of overburden.
 - a. True
 - b. False (Modules 3-4)
20. When a team locates a body, the usual procedure is to report the location to the command center.
 - a. True (Modules 6-8)
 - b. False
21. If shafts are used as the two main airways, the intake airway is called the downcast shaft, and the exhaust airway is referred to as the upcast shaft.
 - a. True (Modules 3-4)
 - b. False
22. If pressure difference exists naturally between the two airways, then the mine has _____ ventilation.
 - a. Mechanical
 - b. High Pressure
 - c. High Volume
 - d. Natural (Modules 3-5)
23. The teams map person is responsible for marking down information on the map as the team explores and assesses ground conditions.
 - a. True
 - b. False
24. Temporary bulkheads are usually built of canvas brattice cloth or plastic.
 - a. True (Modules 3-9)
 - b. False

25. Check curtains are fastened at the bottom only and can be either one piece or have a slit in them or overlapping flaps.
 - a. True
 - b. False (Modules 3-9)
26. A line brattice is especially useful for rescue teams to use when they need to flush out or ventilate a small area of the mine.
 - a. True (Modules 3-10)
 - b. False
27. Locomotives can be used during barefaced exploration as long as there is no smoke and no evidence of explosive gases.
 - a. True (Modules 4-6)
 - b. False
28. The fresh air base also functions as a base of communication for the operation linking the team, the command center, and the media.
 - a. True
 - b. False (Modules 4-6)
29. The fresh air base should be situated where it's assured a supply of good water.
 - a. True
 - b. False (Modules 4-7)
30. An example of a first priority condition is second degree burns covering more than ____% of the body.
 - a. 20
 - b. 25
 - c. 30 (Modules 6-5)
 - d. Only third degree burns can be first priority.