

Team Member Written Test
2012 Southeast/Central Kentucky Mine Rescue Contest
June 19, 2012
Maysville, Kentucky

Name _____ Company _____

Team Name _____ Contest Position No. _____

Team Member No. _____

Circle the letter for your answer. Circle only one answer.

1. A mine rescue and recovery operation simply consists of a team going into the mine to rescue survivors or put out a fire.
 - a. true
 - b. false

2. Federal officials have the following function(s) in a mine rescue event:
 - a. advise and observe
 - b. supervise and direct
 - c. consult
 - d. all of the above
 - e. none of the above

3. The mine rescue team is under direct supervision of the team captain.
 - a. true
 - b. false

4. All roads and paths leading to the mine should be secured and guarded by:
 - a. company personnel
 - b. police officers
 - c. either of the above
 - d. none of the above

5. The mine manager or superintendent should establish the command center and oversee all aspects of the rescue and recovery operation.
 - a. true
 - b. false

6. One of the surface operation duties of the mine clerk is to examine each person entering the mine for matches and smoking materials.
 - a. true
 - b. false

7. Which one of the following is a false statement:
 - a. Portable gas detectors accurately detect oxygen deficiency, carbon monoxide, methane, and hydrogen sulfide.
 - b. Chemical analysis is a more accurate method for detection of other gases.
 - c. Air samples can be collected in evacuated bottles.
 - d. Before March 9, 1978, electrical circuit gas detectors did not have to be approved.

8. Air samples taken from behind sealed areas of the mine are analyzed to determine when it's safe to begin rescue work.
 - a. true
 - b. false

9. Which one of the following best describes a gas:
 - a. has a definite shape and volume
 - b. has a definite volume but changes shape
 - c. has neither shape or volume
 - d. none of the above

10. Which one of the following does not affect the rate of diffusion of a gas:
 - a. air currents in the mine
 - b. turbulence of the air
 - c. temperature
 - d. atmospheric pressure
 - e. flammability range

11. Specific gravity and relative weight mean the same thing.
 - a. true
 - b. false

12. One of the gases below is not soluble in water. Which one?
 - a. sulfur dioxide
 - b. radon
 - c. acetylene
 - d. hydrogen

13. The Threshold Limit Value (TLV) of a gas is typically expressed in:
- percent
 - parts per million
 - parts per billion
 - ph (protons of hydrogen)
14. Asphyxiating gases cause suffocation. They do this by displacing nitrogen in the air.
- true
 - false
15. The gases present in a mine following a disaster will vary according to:
- the type of mine
 - the disaster situation
 - the type of equipment
 - all of the above
 - a and b above
16. Oxygen is an explosive gas.
- true
 - false
17. Downcast is an intake ventilation shaft and upcast is an exhaust ventilation shaft.
- true
 - false
18. When it comes time to fixing the ventilation, the command center will be counting on you to build controls where and how you are instructed.
- true
 - false
19. The natural ventilation pressure can only be supplied by an energy source.
- true
 - false
20. Which of the following describes a bulkhead:
- concrete blocks or other incombustible material
 - sealed tightly against the back, floor, and sides
 - a stopping
 - all of the above
 - a and b above

21. The smoke tube is used mainly to determine what direction very slow moving air is moving but not the velocity.
- true
 - false
22. Which of the following is an incorrect statement:
- It is best to enter the mine by way of the safest intake airway
 - Check the cage to make sure it's operating properly
 - Test an automatic elevator by running it down and up at least once.
 - All of the above are correct
23. A fresh air base is usually established at the point where conditions no longer permit barefaced exploration.
- true
 - false
24. There should be a communication link between the team and the fresh air base.
- true
 - false
25. Logging the times that all personnel enter and leave the fresh air base is the responsibility of:
- not required by anyone
 - fresh air base coordinator
 - mine clerk
 - mine superintendent
26. Which of the following is an example of a class D combustible metal:
- potassium
 - aluminum
 - zinc oxide
 - none of the above
27. Choose the item below to best indicate why a mine fire would be sealed rather than fought directly.
- insufficient materials to fight directly
 - buildup of explosive gases
 - location of the fire
 - all of the above
 - a and b above

28. When survivors are located, the location, time, and date should be marked on the team's map and marked on the side in the passageway where they were found.
- true
 - false
29. A second priority triage condition is:
- inhalation of poisonous gas
 - moderate heat exhaustion
 - third degree burns involving less than 2% of the body
 - none of the above
30. A consideration when re-ventilating after an explosion is the percent of oxygen present.
- true
 - false