

Field Competition General Test

2015 Northern Nevada Regional Contest
Winnemucca, Nevada
March 11 & 12, 2015

Please mark the most appropriate answer on the **answer sheet**. **DO NOT mark on the test as it will not be graded.** You will have **60** minutes to complete all testing. Good luck!

1. A fictitious gas with a relative weight of 1.001 would be _____ than air.
 - a. lighter
 - b. the same weight
 - c. heavier **(2-6)**
2. Oxygen has the same relative weight as air.
 - a. True
 - b. False **(Oxygen's relative weight is 1.1054, making it heavier (page 2-18))**
3. Of the following 3 heavy hydrocarbons, which one has the highest relative weight?
 - a. Propane
 - b. Butane **(2.0100, page 2-23)**
 - c. Ethane
4. Smoke tubes are used to determine slow moving air velocity below _____.
 - a. 130 feet per minute
 - b. 150 feet per minute
 - c. 140 feet per minute
 - d. 120 feet per minute **(page 3-18)**
5. When using a smoke tube a correction must be made to the averaged figure. The way to do this is to:
 - a. either multiply the averaged figure by 0.09 and subtract this number from the averaged figure, or multiply the averaged figure by 0.08.
 - b. either multiply the averaged figure by 0.10 and subtract this number from the averaged figure, or multiply the averaged figure by 0.9. **(page 3-19)**
 - c. Apply the calculation - Quantity (ft.3/min.) = Area (ft.2) x Velocity (ft./min.)
6. Air locks are used by mine rescue teams:
 - a. To establish a fresh air base.
 - b. When opening a door or knocking out a bulkhead behind which conditions are not definitely known.
 - c. Before opening a barricade in bad air behind which trapped miners may be located.
 - d. All of the above. **(Module 3 test, page 3-49)**

7. It's typically the Mine Manager's responsibility to ensure that unauthorized persons do not go past the fresh air base.
 - a. True
 - b. False **(Page 4-9)**

8. How long does an apparatus certification and record of corrective action have to be kept?
 - a. Six months
 - b. Two years
 - c. One year **(page 4-14)**
 - d. Until the next quarterly inspection

9. Team checks are recommended to take place every _____.
 - a. 50 feet
 - b. 20-30 minutes
 - c. 10-15 minutes
 - d. 15-20 minutes **(page 4-20)**

10. During exploration of a mine, if your primary communication system fails to work you may have to use a back-up means of communicating with the FAB (by tugging on the communication cable). When tugging on the cable, the number of tugs is not the same as the number of honks the captain gives on his horn to signal movement.
 - a. True
 - b. False **(pages 4-21 & 4-23)**

11. During exploration of a mine you don't need to map the location of firefighting equipment.
 - a. True
 - b. False **(item #6, page 4-30)**

12. Who typically decides on how a mine rescue team will fight a fire?
 - a. Team Captain
 - b. Fresh Air Base Coordinator
 - c. Command Center **(page 5-5)**

13. When using a hand-held fire extinguisher to put out a fire, you should hold the nozzle at a _____ degree angle.
 - a. 25
 - b. 75
 - c. 45 **(page 5-7)**
 - d. 180

14. Low expansion foam is wet, light & fluffy.
 - a. True
 - b. False **(page 5-9)**

15. There are certain factors that must be considered when planning to build a seal. Which item shown below is not a factor?
- The amount of toxic gases liberated in the mine or present in the area. **(page 5-19)**
 - The location of the fire and the area involved.
 - The composition of the overlying strata.
 - The building sites for the seals.
16. When sealing a mine fire the last step is to close the seals starting with the intake first and then the exhaust.
- True
 - False **(simultaneously, page 5-22)**
17. When taking air samples from a sealed area barometric pressure and temperatures will vary both inside and outside of the sealed area. These differences in pressure are usually described as “breathing in”, “breathing out” and _____.
- “static”
 - “suffocating”
 - “neutral” **(page 5-23)**
 - None of the above
18. In searching for survivors, it’s important for the team to look for clues. Some visible clues could include:
- Written notes inside of lunchboxes
 - Markings on ribs or rails
 - Self-rescuer covers
 - All of the above **(pages 6-3 & 6-4)**
19. During triage the presence of a back injury with spinal injuries is considered a first priority.
- True
 - False **(Page 6-6)**
20. If you come across a survivor whose pelvis or legs have been trapped under heavy debris you should:
- Immediately pull the debris off
 - Request directions from the surface on how to maintain blood pressure **(Page 6-6)**
 - Amputate the limb if it’s only one leg or foot
 - None of the above
21. If a survivor is found that can walk out on his or her own, the survivor should follow the co-captain (tail captain).
- True
 - False **(page 6-7)**
22. During exploration when a body is found the team should:
- If possible outline the body with chalk or paint

- b. Mark the location/position on the mine map
- c. Mark the location on the passageway where the body is found
- d. All of the above **(Page 6-8)**

23. Rigor mortis usually sets in _____ on an obese miner in comparison to a miner that has a muscular physique.

- a. Slower **(page 6-9)**
- b. Faster
- c. At the same rate

24. The human body is comprised of approximately ____% fluid.

- a. 70
- b. 80 **(page 6-9)**
- c. 60

25. One of the main factors governing the time for unsealing a fire area is the effect of temperature on the enclosed area.

- a. True **(page 7-5)**
- b. False

26. High levels of carbon Monoxide behind a seal usually means it is :

- a. The fire is out and it's okay to open the seal
- b. The air behind the seal has cooled and it's okay to open the seal
- c. The barometric pressure behind the seal has fallen and it's okay to open the seal
- d. The seal should not be opened. **(page 7-6)**

27. The method commonly used in multi-level mines to restore ventilation is called:

- a. Direct ventilation **(page 7-7)**
- b. Progressive ventilation
- c. Multistage ventilation
- d. None of the above.

28. When first entering into a fire area during progressive ventilation, the team should build an airlock and enter through the exhaust side.

- a. True
- b. False **(Page 7-8)**

29. Fires and explosions frequently create weakened ground conditions.

- a. True **(Page 7-12)**
- b. False

30. When pumping water, the water lines should be:

- a. Routed to the sump at the lowest level of the mine underground
- b. Routed to the sump at the highest level of the mine underground
- c. Routed anywhere inside the mine
- d. Out of the mine in fresh air **(Page 7-12)**