2015 Kentucky Mining Institute Mine Rescue Contest
Written Field Exams – Day 1 and Day 2

DAY 1

1. Gas layering is like smoke rollback with Methane and Hydrogen the likely gases to _____ layers during a fire. (Donald W. Mitchell Mine Fires, p. 23)

   A. ___ Create
   B. ___ Form*
   C. ___ Build

2. Temporary seals should include _____ for collecting air samples from within the sealed area. (MSHA 3028, pp. 5-24)

   A. ___ Provisions*
   B. ___ Tubes
   C. ___ Pipes

3. Nitrogen dioxide has a reddish-brown color in high _____. (MSHA 3028, pp. 2-18)

   A. ___ Concentrations*
   B. ___ Amounts
   C. ___ Liberations

4. Hydrogen sulfide is flammable and explosive in _____ from 4.3 to 45.5 percent in normal air. (MSHA 3028, pp. 2-20)

   A. ___ Concentrations*
   B. ___ Amounts
   C. ___ Liberations

5. _____ 21 percent of normal air is oxygen. (MSHA 3028, pp. 2-11)

   A. ___ About*
   B. ___ Around
   C. ___ Approximately

6. A mixture of coal dust in air reduces the explosive _____ of methane. (MSHA 2102, p. 32)

   A. ___ Limit*
   B. ___ Range
   C. ___ Amount

7. One _____ of heat during a fire is that it tends to weaken the roof, especially where head coal is left. (MSHA 2105, p. 32)

   A. ___ Effect
   B. ___ Problem
   C. ___ Hazard*

8. It is the responsibility of rescue team members to have all the _____ needed to do the work. (MSHA 2104, p. 23)

   A. ___ Material
   B. ___ Information*
   C. ___ Supplies

9. For teams using a compressed oxygen breathing apparatus, the captain usually notes each team member's gauge reading at each _____ stop and reports the lowest reading to the fresh-air base. (MSHA 2104, p. 32)

   A. ___ Required
   B. ___ Rest*
   C. ___ Team

10. Before using a hand _____ extinguisher it must be checked for the type of fire you are fighting. (MSHA 2105, p. 10)

    A. ___ Fire
    B. ___ Held*
    C. ___ Chemical

DAY 2

1. Monitoring pressures and gases helps determine what is the danger of explosion, how soon _____ have to move to safety, how effective are the techniques being used and is the fire under control. (Donald W. Mitchell Mine Fires, p. 45)

   A. ___ Teams
   B. ___ Rescuers
   C. ___ Firefighters*

2. _____ the carotid pulse for 5 to 10 seconds. (Brady First Responder, p. 174)

   A. ___ Check
   B. ___ Monitor
   C. ___ Take*

3. As the team advances, the map man records what the team encounters by _____ the information on a mine map. (MSHA 2104, p. 48)

   A. ___ Recording
   B. ___ Marking*
   C. ___ Mapping

4. It is recommended that the _____ stop for a team check be just inby the fresh-air base. (MSHA 2104, p. 32)

   A. ___ Required
   B. ___ Team
   C. ___ First*

5. When a _____ is first located, every effort should be made not to disturb any possible evidence in the area. (MSHA 2106, p. 13)

   A. ___ Patient
   B. ___ Person
   C. ___ Body*

6. Rescue teams are responsible for _____ damage to the ventilation system. (MSHA 2107, p. 4)

   A. ___ Assessing*
   B. ___ Correcting
   C. ___ Preventing

7. It is generally recommended that _____ not travel through foam filled areas. (MSHA 2105, p. 17)

   A. ___ Teams*
   B. ___ Rescuers
   C. ___ Firefighters

8. Indirect firefighting methods allow _____ to remain a safe distance from the fire. (MSHA 2105m p. 35)

   A. ___ Teams
   B. ___ Rescuers
   C. ___ Firefighters*

9. If the mine has had an explosion, the team may encounter a great deal of debris, damage to _____, and hazardous roof and rib conditions. (MSHA 3028, pp. 3-22)

   A. ___ Ventilation
   B. ___ Stoppings*
   C. ___ Communications

10. To detect oxygen deficient atmospheres teams will use a (an) _____ _____. (MSHA 3028 pp. 2-14)

    A. ___ Multi-gas detector
    B. ___ Oxygen detector
    C. ___ Oxygen indicator*