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**TEAM #**

**WRITTEN TEST**

**Questions taken from the following sources:**

**Mine Rescue Team Training: Coal Mines MSHA 3028 (formerly IG7)**

**Don Mitchell, Mine Fires**

**2013 Mine Rescue Rules**

**First Aid SM3**

**Team Name**

1. The relationship between hydrogen and active flaming is important, particularly to miners exploring or rehabilitating an area in which fire is believed to have been extinguished.

**Don Mitchell: Interpreting The State of The Fire**

1. Reactions between water and red-hot coals produce hydrogen. Where water is being applied from hoses, this will not be hazardous to miners fighting the fire; the quantities of hydrogen so-produced will be small compared to the quantities liberated and distilled from the coal plus all of the other volatiles and tars.

**Don Mitchell: Interpreting The State of The Fire**

1. To minimize the effects of pressure, from explosion as well as ventilation, stoppings between common entries should be breach (holed through) in at least one, preferably three or more, crosscuts inby where the seals are to be built.

**Don Mitchell: Sealing**

1. Miners building seals and monitoring returns should become exceptionally sensitive to how the air is flowing. Is it a steady (smooth) flow or does it seem to pulsate(breathing as if it inhales as well as exhales- flows out)? Pulsations forecast explosions. Falls of roof can cause pulsations.

**Don Mitchell: Sealing**

1. Oxides of nitrogen are produced by burning and by the detonation and burning of explosives. They are also emitted from the exhaust of diesel engines. In the presence of electrical arcs or sparks, nitrogen in the air combines with oxygen (oxidizes) to form oxides or nitrogen.­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­

**Mine Rescue Team Training: Coal Mines- Oxides of Nitrogen**

**6.** Hydrogen is a highly explosive gas. Air containing 4 to 74.2 percent hydrogen will explode even when there is as little as 5 percent oxygen present. Very violent explosions are possible when air contains more than 7 to 8 percent hydrogen. The presence of small quantities of hydrogen greatly increases the explosive range of other gases.

**Mine Rescue Team Training : Coal Mines- Hydrogen**

**7.** If the briefing officer's designated location is airtight, irrespirable atmospheres can flow

over the location when the briefing officer is at the designated location. However, if the briefing officer is outside of the designated location, irrespirable atmospheres cannot flow across the designated location.

**2013 Mine Rescue Rules**

**8**. If a team finds a patient(s) under or inby an area of unsafe roof and has

the necessary roof support available to recover the patient(s), the team must

stop and recover the patient. If a team subsequently finds necessary roof support to recover the patient(s), the team must stop (prior to the No. 5 team member passing the roof support), retrieve the roof support and recover the patient(s). The team may perform any function during this team stop; however, teams will not be allowed to build ventilation controls , timber unsafe roof or pump water unless necessary to recover the patients(s).

**2013 Mine Rescue Rules**

**9**. Shock can accompany any serious injury: Blood loss, breathing impairment, heart

failure, burns ,etc. Shock can kill; therefore, treat as soon as possible and continue until medical aid is available. Signs/symptoms of shock are shallow breathing, rapid and weak pulse, nausea, collapse, vomiting, shivering, pale moist skin, mental confusion, drooping eyelids and dilated pupils.

**First Aid SM3**

**10.** Signs and symptoms for spinal fracture in an unconscious patient:

-Stroke the soles of the feet with a pointed object; if the spinal cord is undamaged, the feet will react.

-Stoke the palms of the hands with a pointed object; if the spinal cord is

undamaged, the hands will react.

**First Aid SM3**