**Southwest WY Mutual Aid Association**

**2016 Underground Mine Rescue Competition, Rock Springs, WY**

**TEAM TECH - MSHA Publication 3027 Modules 2 & 3**

**Contestant’s Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Company\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Team Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Draw No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Which of the following statements is correct?
2. An increase in pressure causes a gas to expand.
3. A decrease in pressure causes a gas to contract.
4. An increase in temperature causes a gas to contract.
5. None of the above. (Pub 3027 Page 2-5)
6. Light gases or mixtures tend to stratify against the back of the mine.
7. True. (Pub 3027 Page 2-6)
8. False.
9. Which of the following gases has the garlic odor?
10. Hydrogen sulfide
11. Sulfur dioxide
12. Propane
13. Acetylene (Pub 3027 Page 2-24)

1. Blackdamp mixture contains methane and air.
2. True.
3. False. (Pub 3027 Page 2-27)
4. Two gases that are highly soluble in water are:

A. methane and acetylene

B. hydrogen sulfide and hydrogen

C. hydrogen sulfide and sulfur dioxide (Pub 3027 Pages 2-13 to 2-27)

D. nitrogen and sulfur dioxide

1.  This symbol is commonly used for a

A. Mine door

B. Stopping

C. Man door (Pub 3027 page 3-25)

D. Seal

1. When installing a temporary bulkhead in a passageway, the bulkhead should be erected …
   1. At least 4 to 6 feet (Pub 3027 page 3-22)
   2. At least 2 feet
   3. Maximum 4 feet
   4. None of the above
2. As the team advances through the mine during exploration, some of the ventilation controls can be checked.
   1. True.
   2. False. (Pub 3027 page 3-15) (all the ventilation controls should be checked.)
3. Mine rescue teams should alter the existing ventilation:
   1. Only when directed by the command center. (Pub 3027 page 3-15)
   2. When the team captain decides to do so.
   3. When they encounter smoke and/or high concentration of carbon monoxide.
   4. All of the above.
4. The smoke tube is used in the air velocity of …
   1. Below 150 feet per minute
   2. Below 120 feet per minute (Pub 3027 page 3-21)
   3. Below 200 feet per minute
   4. Below 70 feet per minute