South-Western Wyoming Mutual Aid

Unified Mine Rescue Contest

2021

Written Test

Mine Rescue

Day 2

Team: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Working Team Member Number/position:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Team Number Drawn, Day 2:\_\_\_\_\_\_\_\_\_\_\_

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**Circle the letter/s that correspond with the correct answer. Note: there may be more than one correct answer.**

1. Atmospheric pressure and temperature are important factors because they:
2. Affect the rate of diffusion of a gas by ventilation.
3. Can cause false readings on gas detection instruments.
4. Lower oxygen content in the mine.
5. Two gases that are highly soluble in water are:
6. Hydrogen sulfide and hydrogen
7. Nitrogen and sulfur dioxide
8. Hydrogen sulfide and sulfur dioxide
9. The explosive range of methane/air mixture (normally 5-15%) will change if:
10. Certain other combustible gases are present.
11. Coal dust is suspended in the atmosphere.
12. There is less than 12.1% oxygen in the atmosphere.
13. Which of the following is not true of sulfur dioxide?
14. It is explosive.
15. It is toxic.
16. It can occur during mine fires.
17. A gas that is normally found near the roof or in high places in the mine, is said to have a low:
18. Level of toxicity.
19. Level of solubility
20. Specific gravity

2

**Circle the letter/s that correspond with the correct answer. Note: there may be more than one correct answer.**

1. A smoke tube is a devise used to:
2. Determine oxygen content of the mine atmosphere.
3. Determine direction and velocity of air flow.
4. Detect leaks in temporary stoppings.
5. Mine rescue teams erecting temporary stoppings/bulkheads in atmosphere with elevated methane readings should:
6. Use only inflatable seals.
7. Mine rescue teams should never enter such atmosphere.
8. Use non-sparking tools, nails, and spads.
9. Barefaced exploration should be attempted only when:
10. No breathing apparatus is available.
11. Miners are trapped in the mine.
12. A backup mine rescue team with apparatus is immediately available.
13. Gas readings should be taken:
14. At all intersections.
15. At any dead end or face area.
16. At the furthest point of travel in any entry or heading.
17. Debriefings are held to:
18. Inform news reporters of developments.
19. Inform family members of developments.
20. Review the rescue team’s findings after they have returned from underground.

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**Circle the letter/s that correspond with the correct answer. Note: there may be more than one correct answer.**

1. Class A fires are those that involve:
2. Ordinary combustible materials such as wood, plastics, paper, and cloth.
3. Combustible cooking media such as oils and grease commonly found in commercial kitchens.
4. Flammable or combustible liquids such as gasoline, diesel, kerosene, and grease.
5. A monoammonium phosphate extinguisher is effective in fighting:
6. Class A fires
7. Class B Fires
8. Class C Fires
9. Which one of the following actions is not a suggested procedure when a team locates a body?
10. Outline the body with chalk or paint on the floor.
11. Clean up the area around the body for safety and ease of recovery.
12. Report the location to the command center.
13. A mine rescue team could remove standing water from an unventilated area.
14. If gas conditions permit, using non-conductive suction line and a pump set up in fresh air.
15. Standing water can not be pumped from and unventilated area.
16. If the line loses suction, toxic or explosive gases from the contaminated atmosphere could not be drawn out.
17. Probably the best material to use for sealing a mine fire is:
18. Brattice cloth
19. Cement blocks
20. Tongue-and-groove lumber

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