

2021 Craig, CO Mine Rescue Written Test Day 1 KEY

Name _____

Team _____

1. Atmospheric pressure and temperature are important factors because they:

- a. affect the rate of diffusion of a gas by ventilation
- b. can cause false readings on gas detection instruments
- c. lower oxygen content in the mine

2. The type of coal mine where the greatest amount of methane would be likely to be found would be a:

- a. drift mine with tight and compact adjoining strata
- b. drift mine with loose or broken adjoining strata
- c. shaft mine with tight and compact adjoining strata

3. Which of the following is not true of sulfur dioxide?

- a. it is explosive
- b. it is highly toxic
- c. it is highly soluble in water

4. Accumulations of hydrogen in the mine atmosphere are dangerous because hydrogen:

- a. is highly toxic
- b. is highly soluble in water
- c. is highly explosive

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5. Normal air contains approximately what percent oxygen?
- 15%
 - 21%
 - 31%
6. Two instruments commonly used to measure velocity of airflow in a mine are:
- Smoke tube.
 - Smoke tube and CO detector.
 - Smoke tube and anemometer.
7. If at all possible, entry into the mine should be made on:
- A return airway.
 - An intake airway.
 - The main haulageway.
8. Prior to rescue team exploration, the first step to take after a disaster is to:
- Examine all mine openings.
 - Establish a Fresh Air Base.
 - Proceed as far as possible into the mine without apparatus.
9. Barefaced exploration should be attempted only when:
- No breathing apparatus is available.
 - Miners are trapped in the mine.
 - A backup mine rescue team with apparatus is immediately available.

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10. Prior to a mine rescue team passing through a door or stopping/bulkhead behind which conditions are not definitely known, they should:
- Ask the Fresh Air Base to send in the backup team.
 - Erect an air lock to prevent the mixing of atmospheres.
 - Open the door or stopping/bulkhead, and wait at least 10 minutes so that any harmful gases are diffused.
11. If a team member experiences problems with his or her apparatus in by the Fresh Air Base, the team member should:
- Be sent back to the Fresh Air Base with another team member.
 - Switch to the apparatus that was carried on the stretcher or stokes basket.
 - With the entire team, return immediately to the Fresh Air Base.
12. The first indications that an explosion has occurred are often very similar to those of:
- An inundation of water
 - A large roof fall
 - A fan stoppages
13. Burning materials that give off extremely toxic gases in addition to carbon monoxide are:
- The coal seam itself
 - Hydraulic fluids
 - Neoprene and other synthetic rubber compounds

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14. In advancing a Fresh Air Base, after you put up the new air lock, the team should:
- Come out of the mine.
 - Perform gas tests in all dead ends and high places between the old and new Fresh Air Base to ensure that all gases have been flushed from the area.
 - Proceed inby the new Fresh Air Base to explore and let other workers check for any gases outby the new Fresh Air Base.
15. What is a Fresh Air Base (FAB)?
- The underground base of operations and starting point for rescue and recovery work into irrespirable atmospheres.
 - The underground command center of all rescue or recovery work.
 - The location for mine rescue teams to gather, plan and decide how to conduct a rescue or recovery operation.