

Choose the correct answer to each of the following questions:

1. What is a toxic gas? **(Page 6, Question 5, IG 115 Module 2 – Mine Gases)**
 - a. A gas that is capable of causing damage to living tissues, impairment of the central nervous system, severe illness or, in extreme cases, death when it is ingested, inhaled, or absorbed by the skin or eyes.
 - b. A gas that is not capable of causing damage to living tissues, impairment of the central nervous system, severe illness or, in extreme cases, death when it is ingested, inhaled, or absorbed by the skin or eyes.
 - c. A gas that is capable of causing damage to living tissues, severe illness or, in extreme cases, death when it is ingested, inhaled, or absorbed by the skin or eyes.
2. What gases can be detected by color, odor, or taste? **(Page 17, Question 3, IG 115 Module 2 – Mine Gases)**
 - a. Carbon Dioxide, Nitrogen Dioxide, Hydrogen Sulfide, Sulfur Dioxide, Propane and Butane, acetylene
 - b. Nitrogen Dioxide, Hydrogen Sulfide, Methane
 - c. Propane, Methane, Butane, Acetylene, Hydrogen Sulfide
3. An elevated concentration of nitrogen in mine air can be harmful because: **(Page 19, Question 5, IG 115 Module 2 – Mine Gases)**
 - a. It is highly toxic
 - b. It is highly explosive
 - c. It can lower the oxygen content of the air.
4. Acetylene would normally be found in a mine atmosphere where: **(Page 20, Question 11, IG 115 Module 2 – Mine Gases)**
 - a. Diesel equipment is used
 - b. Methane has burned or exploded in air with a lowered oxygen content
 - c. Battery charging stations are located
5. Oxides of nitrogen can occur in a mine atmosphere: **(Page 19, Question 6, IG 115 Module 2 – Mine Gases)**
 - a. When explosives are used
 - b. When electrical equipment is used
 - c. When certain explosives are used, when diesel-powered equipment is being used, when electrical equipment produces arcs or sparks
6. The traverse method is used when: **(Page 47, Question 2, IG 115 Module 3 – Ventilation)**
 - a. Taking a reading with a smoke tube
 - b. Taking a reading with an anemometer
 - c. Erecting a temporary stopping
7. A smoke tube is a device used to: **(Page 47, Question 1, IG 115 Module 3 – Ventilation)**
 - a. Determine oxygen content of the mine atmosphere
 - b. Determine direction and velocity of airflow
 - c. Detect leaks in temporary stoppings

8. What is a Fresh Air Base (FAB)? **(Page 56, Question 1, IG 115 Module 4 – Exploration)**
- The fresh air base is the underground base of operations and starting point for rescue and recovery work into irrespirable atmosphere.
 - The fresh air base is the underground base of operations and starting point for rescue and recovery work into respirable atmosphere.
 - The fresh air base is the base of operations.
9. The purpose of rescue team exploration is to: **(Page 82, Question 2, IG 115 Module 4 – Exploration)**
- Determine conditions underground
 - Locate clues or indications
 - Locate missing miners, determine conditions underground, locate clues or indications of missing miners locations.
10. The captain should mark the date and his or her initials: **(Page 83, Question 9, IG 115 Module 4 – Exploration)**
- Each time the team stops for a rest
 - On all explored areas (faces, entries, crosscuts, impassable falls, barricades, stoppings, etc.)
 - Every 50 feet
11. A monoammonium phosphate fire extinguisher is effective in fighting: **(Page 112, Question 6, IG 115 Module 5 – Fires/Firefighting/Explosions)**
- Class A and Class B Fires
 - Class A, B, C fires
 - Class A, B, C, and D fires
12. Probably the best material to use for sealing a mine fire is: **(Page 113, Question 9, IG 115 Module 5 – Fires/Firefighting/Explosions)**
- Brattice Cloth
 - Cement Blocks
 - Tile or bricks
13. What are the preconditions for opening a sealed fire area: **(Page 125, Question 2, IG 115 Module 5 – Fires/Firefighting/Explosions)**
- The oxygen content of the atmosphere in the sealed area should be low enough so that an explosion is impossible, there should be no carbon monoxide, indicating that the fire is out, the sealed area should have cooled enough so that the fire is not rekindled when the area is re-ventilated.
 - The oxygen content of the atmosphere in the sealed area should be high enough so that an explosion is impossible, there should be no carbon monoxide, indicating that the fire is out, the sealed area should have cooled enough so that the fire is not rekindled when the area is re-ventilated.
 - The oxygen content of the atmosphere in the sealed area should be low enough so that an explosion is impossible and the sealed area should have cooled enough so that the fire is not rekindled when the area is re-ventilated.

14. Barefaced exploration should be attempted only when: **(Page 82, Question 4, IG 115 Module 4 – Exploration)**
- a. No breathing apparatus is available
 - b. Miners are trapped in the mine
 - c. A backup mine rescue team with apparatus is immediately available
15. Debriefings are held to: **(Page 84, Question 12, IG 115 Module 4 – Exploration)**
- a. Inform news reporters of developments
 - b. Inform family members of developments
 - c. Review the rescue teams findings after they have returned from underground