

New Iberia  
BG4 Team Technician  
2012

1. For temperatures up to \_\_\_\_\_ F degrees, using ice, the period of use of the bg4 is 4 hours.  
A. 100      B. 103      C. 104      D.105
2. For temperatures above \_\_\_\_\_ F degrees, using ice, the period of use is 1 hr.  
A. 104      B. 103      C. 100      D. 105
3. For temperatures above \_\_\_\_\_ F degrees, using ice, the period of use is 15 min.  
A. 103      B. 141      C. 130      D.131
4. The carbon cylinder filled with 3000 psi is 413 liters ?  
A. True      B. False
5. The weight difference between a carbon and steel cylinder is \_\_\_\_ lbs.  
A. 1      B. 1.5      C. 1.7      D. 2
6. Where is the dust sieve located on the bg4 ?  
A. reducer      B relief valve      C breathing bag      D. canister
7. The range for medium pressure from the reducer is 57-64 psi. ?  
A. True      B. False
8. Which of the following is not true of the minimum valve?  
A. activates between .1 and 2.5 mbar  
B Provides 80 L/sec flow  
C. utilizes medium pressure from the reducer  
D. Installed in the breathing loop
9. Breathing bag volume is \_\_\_\_\_ liters?  
A. 4      B.4.5      C. 5      D. 5.5
10. Plexiglas can be used in the Panorama Nova mask ?  
A. True      B. False

11. MSHA requires mine rescue stations serving underground M/NM mines to measure concentrations for carbon monoxide from \_\_\_\_\_.

- A. 0% to 100%
- B. 0% to 20%
- C. 0 ppm to 9,999 ppm (answer on page 2-3, 5<sup>th</sup> paragraph)
- D. 0 ppm to 999 ppm

12. The presence of small quantities of hydrogen \_\_\_\_\_ the explosive range of other gases.

- A. Slightly increases
- B. Slightly decreases
- C. Greatly increases (answer on page 2-18, last paragraph)
- D. Greatly decreases

13. It is more difficult for concentrations of explosive gases to build up when the barometric pressure is high.

- A. True
- B. False (answer on page 2-6)

14. Firefighting with water or foam cannot produce hydrogen.

- A. True
- B. False (answer on page 2-19, Meanings of Findings states it can)

15. The explosive range of propane is \_\_\_\_\_.

- A. 0.01% to 9.85%
- B. 1.75% to 9.15%
- C. 1.97% to 10.68%
- D. 2.12 % to 9.35% (answer on page 2-23, under explosive range and flammability)

From MSHA Publication 3027 Module 3 Ventilation

16. Porous stoppings such as concrete block stoppings are usually plastered \_\_\_\_\_ to reduce air leakage.
- A. Low-pressure side
  - B. High-pressure side (answer on page 3-8, 5th paragraph)
  - C. Both sides
  - D. None of the above
17. A medium-velocity (or regular) anemometer measures velocities from \_\_\_\_\_ to \_\_\_\_\_ feet per minute.
- A. 100, 2500
  - B. 200, 3,000
  - C. 500, 5,000
  - D. None of the above (answer is on page 3-16, anemometers)
18. An anemometer measures feet of travel and requires timing- usually one minute- to determine velocity in feet per minute.
- A. True
  - B. False (answer on page 3-16, measures linear feet of travel)
19. A pilot tube is used to measure high velocities encountered in flowing ducts and tubing where measurements with an anemometer are difficult.
- A. True
  - B. False (answer on page 3-16, pitot tube)
20. If pressure difference exists naturally between two airways, then the mine has mechanical ventilation.
- A. True
  - B. False (3-5, 2<sup>nd</sup> paragraph, natural ventilation)
21. Oxygen enriched atmospheres may cause combustible gas readings to be higher than actual concentrations?
- A. True
  - B. False
22. If there is an oxygen sensor installed in the iTX or MX6, is it calibrated during the zeroing operation?
- A. True
  - B. False
23. The iTX and MX6, battery display is in the upper right hand corner of the display.
- A. True
  - B. False

24. During calibration of the iTX or MX6, what is the recommended flow rate?
- A. 0.5 LPM
  - B. 1.5 LPM
  - C. 2.0 LPM
  - D. none of the above
25. Industrial Scientific recommends that a full instrument calibration be performed \_\_\_\_\_.
- A. Daily
  - B. Weekly
  - C. Monthly
  - D. None of the above
26. When using the iTX or MX6 silica compound vapors can affect the combustible gas sensor and may cause readings of combustible gas to be higher than actual gas concentrations.
- A. True
  - B. False
27. The calibration of the combustible gas sensor in the iTX or MX6 should not be verified after any incident where the combustible gas content has caused the instrument to display an over range condition.
- A. True
  - B. False
28. Sudden changes in atmospheric pressures in the iTX and MX6 will not cause temporary fluctuations in the oxygen reading.
- A. True
  - B. False
29. The manufacturer recommends that a functional (Bump) test be performed on every instrument before each days use.
- A. True
  - B. False
30. The iTX and MX6 does not use rechargeable battery packs P/N 1301-1864 and P/N 1781-4568.
- A. True
  - B. False