

Test Questions MX6
2014 Dalton GA

Name_____Company_____

Team Name_____Contest Position Number_____

Team Member Number_____

Directions: circle the letter preceding the correct answer to each of the following questions: Circle only one answer per question

1. When the barometer falls, this means:
 - a. Gases will diffuse more quickly
 - b. The atmospheric pressure is rising
 - c. It is much easier for explosive gases to build up
 - d. Gases are squeezed into a smaller area

2. Methane is most explosive at what range
 - a. 5% to 15% with at least 12.1% oxygen
 - b. 9.5% to 12.5% with at least 12.1% oxygen
 - c. 5% to 10%
 - d. 9.5% to 10%

3. Electrical malfunctions will not produce oxides of nitrogen
 - a. True
 - b. False

4. Usually, the measured distance using a smoke tube is _____feet.
 - a. 100
 - b. 50
 - c. 75
 - d. 25

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5. Asphyxiating gases:
 - a. Can, in all cases, be tasted, smelled, or seen
 - b. Cause suffocation
 - c. Cause the metal parts of an apparatus to corrode
 - d. Do not produce an oxygen deficient atmosphere

6. The explosive range of hydrogen is _____ to 74.2%.
 - a. 7%
 - b. 5%
 - c. 4%
 - d. 3%

7. An anemometer is a small windmill device with a mechanical counter that measures air velocities of over _____ feet per minute.
 - a. 100
 - b. 110
 - c. 120
 - d. None of the above

8. Mine ventilation air always moves from _____
 - a. Neutral pressure regions to atmospheric pressure regions.
 - b. Low pressure regions to high pressure regions.
 - c. High pressure regions to low pressure regions
 - d. Balanced pressure regions to unbalanced pressure regions.

9. A partially opened mine door cannot be used as a regulator.
 - a. True
 - b. False

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10. The most accurate measurement of air velocity using a smoke tube is obtained by take readings at quarter points within the airway.
 - a. True
 - b. False

11. Oxygen deficient atmospheres may cause combustible gas readings to be higher than actual concentrations.
 - a. True
 - b. False

12. Oxygen enriched atmospheres may cause combustible gas readings to be lower than actual concentrations.
 - a. True
 - b. False

13. The battery icon at >50% is what color?
 - a. Blue
 - b. Yellow
 - c. Red

14. When calibrated using methane concentrations less than 5% of volume, reading accuracy of the infrared methane sensor may not be guaranteed to be better than _____?
 - a. +/- 15%
 - b. +/- 20%
 - c. +/- 25%

15. To power up the MX6 instrument, locate, press and hold the center [ENTER] navigation button for at least 2 seconds.
 - a. True
 - b. False

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16. The Normal Operations Menu has a _____ background and the Configuration Menu has a _____ background.
- white, blue
 - white, red
 - white, yellow
17. If all three alarms are disabled, "ALARMS OFF!" is displayed at the bottom of the normal readings screen in black.
- True
 - False
18. The user has _____ minutes to apply gas before the calibration times out.
- two
 - three
 - five
19. A high-level alarm has an audio indicator that beeps with a high frequency and visual alarm LEDs that are pulsed with short delay.
- True
 - False
20. _____ error events for the instrument are recorded into a FIFO queue in non-volatile memory and are time stamped.
- Fifteen
 - Twenty
 - Twenty-five
21. The infrared methane sensor is not to be used for methane concentrations below 5% in air.
- True
 - False

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22. Verify the calibration of the combustible gas sensor after any incident where the combustible gas content has caused the instrument to display an over-range condition.
a. True
b. False
23. The recommended calibration gas for infrared methane sensor calibration is 99% volume methane.
a. True
b. False
24. A bump test is intended to be a measure of the instruments accuracy.
a. True
b. False
25. Sudden changes in atmospheric pressure may cause temporary fluctuations in the oxygen reading.
a. True
b. False
26. The sensor readings are displayed as solid _____ numerals during normal operation, and solid _____ numerals during alarm conditions.
a. black, black
b. black, red
c. red, red
27. Access to the Configuration Menu cannot be protected using a security password.
a. True
b. False

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28. Silicone compound vapors or other known contaminants may affect the combustible gas sensor and cause readings of combustible gas to be lower than actual gas concentrations.
- a. True
 - b. False
29. For calibration, gas should be applied at a flow rate of _____.
- a. 0.5 lpm
 - b. 1.0 lpm
 - c. 1.5 lpm
30. There are only two different cradles are available for use with the MX6 multi-gas monitor.
- a. True
 - b. False