**Southern Regional Mine Rescue Contest**

**New Iberia, LA**

**May 2016**

**Team Tech W/BG4 Written Test**

1. A carbon cylinder has a \_\_\_\_ year lifespan.
   1. 5
   2. 10
   3. 12
   4. 15 (Page 45)
2. BG-4 minimum valve activates between \_\_\_ and \_\_\_mbar.
   1. 1 and 2
   2. .1 and .2
   3. .1 and 2.5
   4. 1 and 2.5 (Page 46)
3. A BG4 breathing bag has a \_\_\_ liter volume.
   1. 50
   2. 1.5
   3. 5.0
   4. 5.5 (Page 51)
4. The panorama nova mask has \_\_\_\_% of peripheral vision.
   1. 50
   2. 75
   3. 90 (Page 53)
   4. 100
5. The color of the medium pressure hose is blue.
   1. True
   2. False (Page 19)
6. The high pressure transducer does what?
   1. Converts pressure into digital signal (Page 54)
   2. Converts pressure into breathable air
   3. Converts pressure into energy
   4. Converts pressure into hot air
7. When checking the exhalation valve you set the RZ tester to\_\_\_\_.
   1. Negative pressure pumping (Page 25)
   2. Positive pressure pumping
   3. Leak test
   4. Dosage 0.5 – 2 L/min
8. When checking the inhalation hose, part of the procedure is to pinch the \_\_\_ tightly with your hand.
   1. Inhalation hose
   2. Exhalation hose (Page 25)
   3. High pressure hose
   4. None of the above
9. The sentinel switch box monitors low voltage.
   1. True
   2. False (Page 54)
10. What does the yellow button on the sentinel do?
    1. Activates the backlight
    2. Activates the automatic distress signal-unit (ADSU)
    3. Panic button - Activates the manual distress signal-unit (DSU) (Page 55)
    4. Shows the oxygen bottle pressure in psi/bar
11. Check curtains are used to deflect the intake air current into a working area.
    1. True (Page 3-9)
    2. False
12. Line brattice is especially useful for rescue teams to use when they need to flush out or ventilate a large area of the mine.
    1. True
    2. False (3-10)
13. A partially opened mine door can be used as a regulator.
    1. True (Page 3-12)
    2. False
14. Regulators are devices used to control and adjust the quality of air in the mine.
    1. True
    2. False (Page 3-14)
15. The smoke tube is used mainly to determine what direction very slow-moving air is moving, and at what velocity.
    1. True (Page 3-16)
    2. False
16. Propane is a heavy hydrocarbon.
    1. True (Page 2-23)
    2. False
17. Explosive range for butane is \_\_\_ to \_\_\_ in normal air.
    1. 1.68 to 8.14
    2. 2.12 to 9.35
    3. 1.88 to 8.40
    4. None of the above (Page 2-23)
18. The specific gravity for Acetylene is 0.9107
    1. True (Page 2-24)
    2. False
19. Acetylene is colorless and tasteless but has a slight \_\_\_ odor.
    1. Old Spice - Fresh
    2. Orange Peel
    3. Garlic (Page 2-24)
    4. Vanilla
20. Radon is not soluble in water.
    1. True
    2. False (Page 2-25)
21. High off-scale readings may indicate explosive concentrations.
    1. True (MX6 Operation Guide Rev 9 pg. 4)
    2. False
22. Bump tests do not allow the option of skipping a sensor.
    1. True
    2. False (MX6 Operation Guide Rev 9 pg. 22)
23. The visual alarm is also used as the confidence indicator which, when enabled, blinks the LEDs once every 15 seconds.
    1. True
    2. False (MX6 Operation Guide Rev 9 pg. 7)
24. The battery level is not recorded by the data logger.
    1. True
    2. False (MX6 Operation Guide Rev 9 pg. 8)
25. Passwords are a minimum of three characters and a maximum of ten characters.
    1. True (MX6 Operation Guide Rev 9 pg. 26)
    2. False
26. The Infrared (I/R) port provides data transmission speeds of \_\_\_\_\_\_\_\_ bytes/second.
    1. 56,000
    2. 89,100
    3. 115,200 (MX6 Operation Guide Rev 9 pg. 7)
    4. 154,300
27. If the user doesn’t remember the password, entering \_\_\_\_\_\_ and pressing \_\_\_\_\_\_ simultaneously resets the password to nothing.
    1. 123, ◄ and ►
    2. 412, ◄ and ► (MX6 Operation Guide Rev 9 pg. 26)
    3. 123, ▲ and ▼
    4. 412, ▲ and ▼
28. \_\_\_\_\_\_\_\_\_\_ must be applied to zero a CO2 sensor.
    1. Zero air (MX6 Operation Guide Rev 9 pg. 34)
    2. Atmospheric mix
    3. 25 ppm CO2
    4. 19% Oxygen
29. The typical run time for a fully charged battery operating at room temperature for a MX6 ibrid with a pump and an alkaline battery pack is \_\_\_\_\_ hours.
    1. 20
    2. 12
    3. 10
    4. 5 (MX6 Operation Guide Rev 9 pg. 37)
30. The measurement range of the Nitrogen Dioxide sensor is listed as \_\_\_\_\_\_\_\_\_\_ ppm.
    1. 0-50
    2. 0-100
    3. 0-150 (MX6 Operation Guide Rev 9 pg. 39)
    4. 0-1000