**Southern Regional Mine Rescue Contest**

**New Iberia, LA**

**May 2016**

**Team Tech W/Bio 240R Written Test**

1. The BioPak 240R battery is to be changed in fresh air only.
   1. True (MN Rev M, Page 6)
   2. False
2. Prior to using the BioPak 240R it must be determined that the user is mentally fit.
   1. True
   2. False (MN Rev M, Page 7)
3. The BioPak 240R is approved only with the oxygen cylinder is fully charged with compressed medical or aviation grade oxygen.
   1. True (MN Rev M, Page 8)
   2. False
4. DOT requires carbon fiber wrapped, aluminum cylinders be tested by an approved facility on a \_\_\_ year cycle from the date of manufacture.
   1. 10
   2. 15
   3. 5 (MN Rev M, Page 8)
   4. None of the above
5. It is ok to apply anti-fog solutions of any kind to the lens of the facemask.
   1. True
   2. False (MN Rev M, Page 11)
6. The oxygen cylinder must be fully charged to \_\_\_\_\_\_ psi with oxygen before use.
   1. 2000
   2. 2500
   3. 3000 (MN Rev M, Page 11)
   4. 2800
7. During the Low Pressure Leak Test if the apparatus drops more than 0.2” in the 60 second there is a leak that must be located and repaired.
   1. True (MN Rev M, Page 13)
   2. False
8. The OrbSorb carbon dioxide scrubbers cannot be pre-packed into the apparatus during turn around maintenance.
   1. True
   2. False (MN Rev M, Page 14)
9. Duracell #MN1604 is an approved battery for use in the BioPak 240R unit.
   1. True (MN Rev M, Page 33)
   2. False
10. The Valve Assembly shall be installed into the cylinder at a torque of 80 +/- 1 foot pound.
    1. True
    2. False (MN Rev M, Page 34)
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