

**Missouri Mine Rescue Contest**  
**Rolla, MO**  
**September 23-25, 2014**  
**BG4 Written Test**

1. The panorama Nova mask is tested with negative pressure?
  - A. True
  - B. False
  
2. The high pressure o-ring should be replaced every 6 months?
  - A. True
  - B. False
  
3. The temperature for drying must not exceed 60 degrees C?
  - A. True
  - B. False
  
4. Weight of the Bg4 with 1.4 kg ice, mask and charged cylinder is \_\_\_ lbs.
  - A. 31
  - B. 32
  - C. 33
  - D. 34
  
5. A carbon cylinder holds 2 quarts of compressed air?
  - A. True
  - B. False
  
6. Relief valve, on the reducer, activation is \_\_\_ psi?
  - A. 78
  - B. 85
  - C. 87
  - D. 80
  
7. Bypass output is 50 psi?
  - A. True
  - B. False
  
8. Minimum valve output is 80 psi?
  - A. True
  - B. False
  
9. The minimum valve utilizes medium pressure from the reducer?
  - A. True
  - B. False
  
10. The inhalation flange side of the center connector is short?
  - A. True
  - B. False
  
11. Moisture trap opens at < 10 mbar?
  - A. True
  - B. False

12. The breathing temperature at 240 minutes with a breathing rate 30 l/min and ambient temperature at 75 degrees F is \_\_\_\_\_.
- A. 93
  - B. 95
  - C. 98
  - D. 100
13. Operation with out ice pack is also permitted 0 degrees C.
- A. True
  - B. False
14. At a pressure greater than 1.4 mbar the negative pressure warning must react?
- A. True
  - B. False
15. Set “pump negative pressure” to check inhalation valve.
- A. True
  - B. False
16. To check the relief valve, an opened cylinder and bypass can be used to inflate the bag?
- A. True
  - B. False
17. The constant dosage must be between 1.5 and 1.9 L/sec.?
- A. True
  - B. False
18. After minimum valve check the RZ remains at position “pump negative pressure”.
- A. True
  - B. False
- 19 Minimum Valve test, observe pressure gauge; the admission of the minimum valve must activate before 1.2 mbar?
- A. True
  - B. False
- 20 To check the bypass valve, set the RZ on negative pressure?
- A. True
  - B. False
21. The smoke tube is used mainly to determine what direction very slow-moving oxygen is moving, and at what velocity.
- A. True
  - B. False
22. \_\_\_\_\_ are devices used to control and adjust the quantity of airflow in the mine.
- A. Anemometers
  - B. Auxiliary Fans
  - C. Regulators
  - D. None of the above

23. To obtain the “flow” of air through the mine there must be a difference in air quality between the intake and exhaust airways.
- A. True
  - B. False
24. If placards have not been changed after \_\_\_\_\_ seconds, teams must assume that their actions were not successful.
- A. 10
  - B. 20
  - C. 15
  - D. 30
25. No team member may advance more than (3) feet beyond the second (2<sup>nd</sup>) intersection before tying across and/or behind into all unexplored areas that intersect.
- A. True
  - B. False
26. The captain must verbally indicate to the judges each time initials and dates are simulated.
- A. True
  - B. False
27. Whether to use regulators to control the fire or to entirely seal the fire must be decided by the \_\_\_\_\_.
- A. Fresh Air Base Attendant
  - B. Mine Manager
  - C. Team
  - D. Command Center
28. The most dangerous aspect of methane is the fact that it is toxic.
- A. True
  - B. False
29. Knowing the effects of air current, temperature, and pressure on a gas will help you determine its rate of diffusion.
- A. True
  - B. False
30. Your team will make frequent tests for gases as it advances beyond the portal.
- A. True
  - B. False