

# BG-4 TEST

1	D	14	A	
2	C	17	C	
3	C < OUR ANSWER	18	C	
4	B	19	C	
5	B	20	D	
6	A	21	<del>B</del> A	ORDER ?
7	A	22	C	
8	A	23	B	
9	C	24	D	
10		25	B	
11	A - <del>THIS</del> ANSWER	26	<del>A</del> B	
12	C	27	A	
13	D	28	A	
14	A	29	B	
15	B	30	B	

#3 IS NONE OF THE ABOVE < > ?

#10 Not a good QUESTION

#11 dosage Rate according to Book 30/min

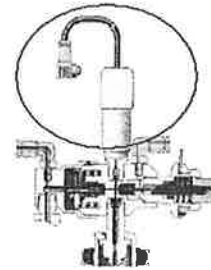
#21 misspell odor protest > did not get back

#22 misspell odor protest

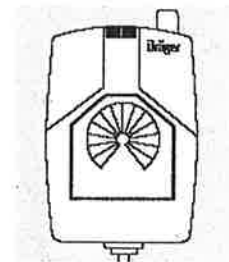
**2014 Southwestern Regional Mine Rescue Contest**  
**Carlsbad, NM**  
**Bg4 Written Test – Field Competition**

1. Name the area/s in which the medium pressure is used?
  - a. Dosage line
  - b. Emergency bypass
  - c. Minimum valve
  - d. a. and c.
  
2. A major component group of the BG4 is the:
  - a. reducer
  - b. breathing bag
  - c. Pneumatics
  - d. dosage line
  
3. The high pressure leak test (OCR/CCR) when using the Monitron or Sentinel will:
  - a. check leak tightness and dosage flow
  - b. determine cylinder pressure and minimum valve activation
  - c. ensure cylinder pressure is < 2600 PSI
  - d. none of the above

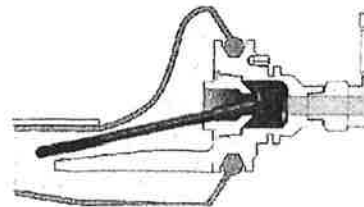
4. What is the component circled on the reducer?
  - a. Relief valve
  - b. Transducer
  - c. Dosage line
  - d. Minimum valve



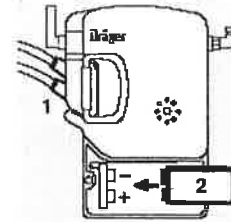
5. Two low pressure cylinder alarm points:
  - a. 100 and 600 PSI
  - b. 700 and 145 PSI
  - c. 200 and 1200 PSI
  - d. none of the above



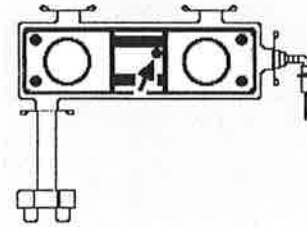
6. The valve shown to the right should open/activate between what ranges?
  - a. 0.1 to 2.5 mbar
  - b. 1.0 to 3.0 mbar
  - c. 2.0 to 5.0 mbar
  - d. 14 mbar or greater



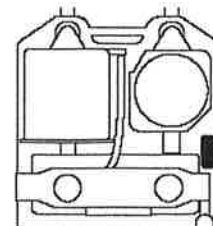
7. Only approved 9 volt DC alkaline batteries may be used in the Monitron/Sentinel?
- True
  - False



8. The drain valve must not open at 10 mbar of breathing loop pressure?
- True
  - False



9. A major component group of the BG4 is the:
- transducer
  - minimum valve
  - breathing loop
  - dosage line
10. How could positive pressure leaks be located?
- Using the OCR/CCR test
  - Use the plug kit
  - Use water or a leak detector fluid
  - All the above
11. The dosage rate between 1.5 to 1.9 L/M is based upon a breathing rate of:
- 40 L/M
  - 80 L/M
  - 100 L/M
  - None of the above
12. The first cylinder pressure warning for the BG4?
- 1500 PSI
  - 2600 PSI
  - Approximately 25% of full cylinder
  - ± 10 percent of full cylinder pressure
13. What variables would affect the duration of the BG4 use?
- User's physical condition
  - Stress, anxiety and excitement
  - Amount of physical work performed
  - All of the above apply
14. The relief valve vents exhaled air from the input of the CO2 scrubber.
- True
  - False



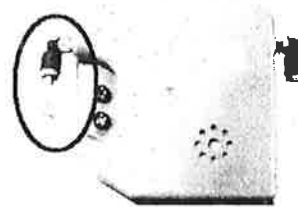
15. Both dosage and positive pressure leak tests must be timed for 1 minute?
- True
  - False

16. The mask must always be leak tested after replacing the lens?
- True
  - False



17. The Monitron/Sentinel System consists of how many components?
- One
  - Two
  - Three
  - None of the above

18. What is purpose of the sintered filter?
- Water filter
  - Filters the dosage O<sub>2</sub>
  - Vents excess pressure
  - Filters ambient air pressure (zero reference)



19. The carbon composite or metal cylinder must be hydro-tested every:
- 3 years
  - 4 years
  - 5 years
  - 15 years



20. An alarm warning the user that the oxygen cylinder has not been turned on?
- Low battery indicator
  - Low-pressure leak test
  - Low-pressure warning that activates at 700 PSI when breathing
  - Low-pressure warning that activates before 1.4 mbar within the breathing loop

21. In order for a flammable gas to explode, there must be enough of the gas at the mine, enough oxygen, and a source of ignition.

- True
- False

22. Color, order, and taste are physical properties that can help you identify a gas, especially during \_\_\_\_\_ exploration.

- Emergency
- Surface
- Barefaced
- None of the above

23. You can tolerate concentrations of up to  $\frac{1}{2}$  of 1 percent CO<sub>2</sub> over a 10-hour daily period without harmful effects.
- True
  - False
24. The specific gravity of Carbon Dioxide is:
- 1.2591
  - 1.9125
  - 1.5219
  - 1.5291
25. After a fire, explosion, or flood in a mine, rescue teams are usually needed to go into the mine to assess and reestablish working conditions.
- True
  - False
26. When it comes to fixing the ventilation, the fresh air base will be counting on you to build controls where and how you are instructed.
- True
  - False
27. With mechanical ventilation, mine fans are used to create the pressure differential by changing the air pressure at specific points in the mine.
- True
  - False
28. A blast door is designed to open and relieve pressure when there is blasting so that a bulkhead will not be blown out.
- True
  - False
29. Per 30 CFR Part 49, all mine rescue team members must have completed physical examinations in the past \_\_\_\_\_ months preceding the contest and are capable of performing strenuous work under oxygen.
- 6
  - 12
  - 24
  - None of the above
30. For purposes of contest work, no barricade will be breached if Hydrogen sulfide exceeds (0.001%).
- True
  - False