

**Western Mine Rescue Association
Nevada Underground Mine Rescue Contest
March 11-14, 2024**



Directions:

- 1. Find the correct answer to each of the questions.**
- 2. Select only one answer per question.**
- 3. Then, fill in the corresponding circle on the answer sheet for each numbered question.**

Western Mine Rescue Association

BG4 Apparatus Bench Contest– Written Test

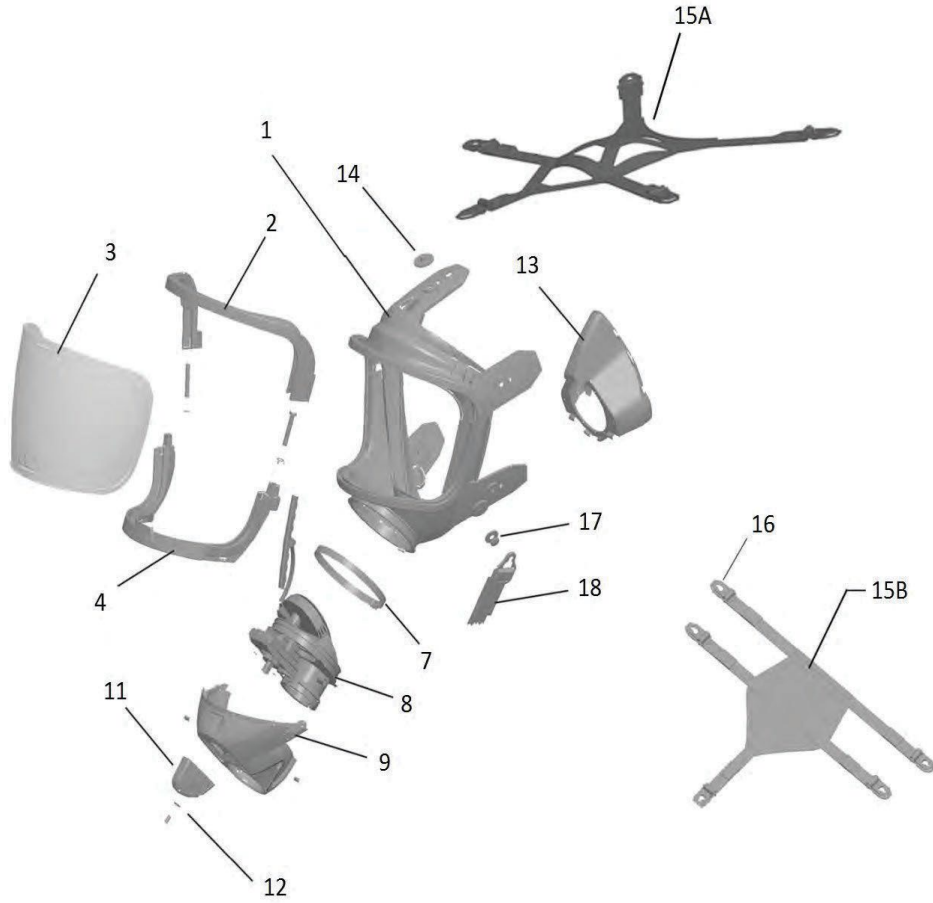
1. The maximum temperature of the air used to dry parts should not go above _____ degree C (_____ degree F)
 - A. 20, 68
 - B. 60, 120
 - C. 60, 140
 - D. 40, 140
2. Only oxygen (medical grade or better) with > _____ % purity is to be used to fill the BG-4 oxygen cylinders
 - A. 95.9
 - B. 21
 - C. 20
 - D. 99.5
3. _____ pressure in the BG-4 is between 58 psi and 64 psi
 - A. Low
 - B. High
 - C. Medium
4. A fully filled oxygen cylinder holds _____ of medical oxygen
 - A. 440 mL
 - B. 220 mL
 - C. 440 L
 - D. 220 L
5. The _____ Breathing hoses use Bayonet Rings
 - A. EDM
 - B. DMP
 - C. EMP
 - D. EPDM
6. During the exhalation valve test, if valve is operating properly, _____ mbar is indicated on the pressure gauge
 - A. +10
 - B. +5
 - C. -10
 - D. -5
7. At the first low pressure warning approximately _____ % of the oxygen has been used up.
 - A. 75
 - B. 95
 - C. 99.5

8. Only the following batteries are approved for use in the Sentinel:
 - A. Rayovac, Eveready, Panasonic, Ultra-life Lithium
 - B. Rayovac, Eveready, Energizer, Duracell
 - C. Energizer, Duracell, Ultra-Life Lithium
 - D. None of the above

9. The oxygen cylinder burst disc ruptures at _____ psi.
 - A. 4,440
 - B. 4,450
 - C. 4,250
 - D. 4,200

10. The weight of a fully charged BG-4 apparatus is _____ kg.
 - A. 15
 - B. 33
 - C. 58
 - D. 64

FPS 7000 Mask



1 Cons. No.	2 Designation	1 Cons. No.	2 Designation
1	Mask Body FPS 7000	13	Inner Mask
2	Upper Visor Frame	14	_____ 15)
3	Visor	15A	Head Strap
4	_____ Visor Frame 11)	15B	Hairnet
7	_____ 12)	16	Sliding Buckle
8	Connector Piece	17	Double Button
9	_____ 13)	18	Neck Strap
11	Turning Knob		
12	_____ 14)		

11 A. Lower
B. Medium
C. Upper

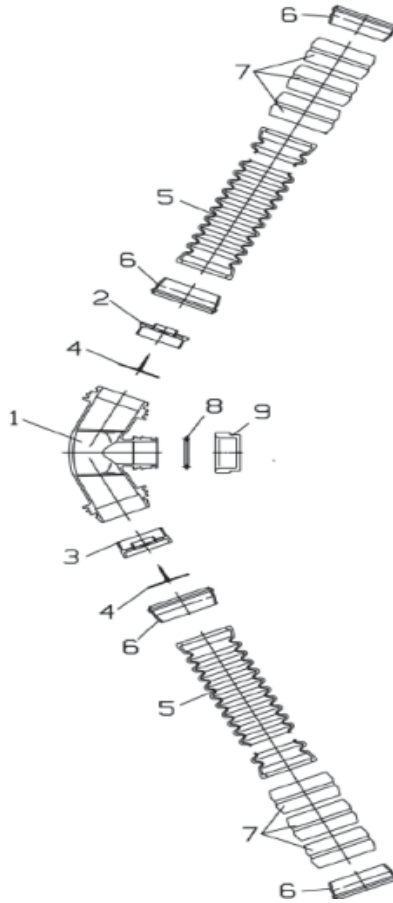
12. A. Cover
B. Button
C. Clamp

13. A. Clamp
B. Cover
C. Button

14. A. Disc
B. Button
C. Clamp

15. A. Disc
B. Button
C. Clamp

Breathing House Assembly



1	2	1	2
Cons. No.	Designation	Cons. No.	Designation
1	_____ 16)	6	Bayonet Ring
2	_____ Valve Seat 17)	7	Anti-Crush rings
3	_____ Valve Seat 18)	8	_____ Sealing Ring 19)
4	Valve Disc	9	_____ 20)
5	Corrugated Hose		

16. A. Tee Coupling
B. Coupling
C. Hose Coupling

17. A. Inhalation
B. Exhalation
C. Toroidal

18. A. Inhalation
B. Exhalation
C. Toroidal

19. A. Inhalation
B. Exhalation
C. Toroidal

20. A. Toroidal
B. Cap
C. Sealing Cap

Western Mine Rescue Association

BG4 Apparatus Bench Contest – Answer Key

ANSWER KEY

- | | | |
|--------------|-------|----------------------------------|
| 1. D | Q#57 | Section IV 2024 Bench BG-4 Rules |
| 2. D | Q#67 | Section IV 2024 Bench BG-4 Rules |
| 3. C | Q#67 | Section IV 2024 Bench BG-4 Rules |
| 4. C | Q#20 | Section IV 2024 Bench BG-4 Rules |
| 5. D | Q#09 | Section IV 2024 Bench BG-4 Rules |
| 6. C | Q#08 | Section IV 2024 Bench BG-4 Rules |
| 7. A | Q#39 | Section IV 2024 Bench BG-4 Rules |
| 8. A | Q#89 | Section IV 2024 Bench BG-4 Rules |
| 9. B | Q#76 | Section IV 2024 Bench BG-4 Rules |
| 10. A | Q#23 | Section IV 2024 Bench BG-4 Rules |
| 11. A | P. 29 | Section IV 2024 Bench BG-4 Rules |
| 12. C | P. 29 | Section IV 2024 Bench BG-4 Rules |
| 13. B | P. 29 | Section IV 2024 Bench BG-4 Rules |
| 14. A | P. 29 | Section IV 2024 Bench BG-4 Rules |
| 15. B | P. 29 | Section IV 2024 Bench BG-4 Rules |
| 16. B | P. 24 | Section IV 2024 Bench BG-4 Rules |
| 17. A | P. 24 | Section IV 2024 Bench BG-4 Rules |
| 18. B | P. 24 | Section IV 2024 Bench BG-4 Rules |
| 19. C | P. 24 | Section IV 2024 Bench BG-4 Rules |
| 20. C | P. 24 | Section IV 2024 Bench BG-4 Rules |