1. A positive pressure leak could be caused by a leakage in or at device components.

1. True\*
2. False

2. The battery in the Sentinel should be replaced every \_\_\_\_\_\_\_\_\_\_.

1. year
2. 3 months
3. 6 months\*
4. month

3. \_\_\_\_\_\_\_\_\_\_ is to be used to lubricate O-rings.

1. Dow Corning 111\*
2. Airkem 33
3. Wesson
4. Cristolube

4. The pressure relief valve is designed to open when the pressure within the breathing circuit is between \_\_\_\_\_\_\_\_\_\_ of pressure measured on the water gage.

1. +20 and +50 millimeters (+2 mbar and +5 mbar)\*
2. +10 and +40 millimeters (+1 mbar and +4 mbar)
3. +30 and +60 millimeters (+3 mbar and +6 mbar)
4. None of the above

5. To prepare for testing adjust the alarm of the RZ-25 tester.

1. True
2. False\*

6. Test adapter is used to connect the BG-4 apparatus to the RZ-25 tester.

1. True\*
2. False

7. A leaky facepiece could be caused by a defective valve seat or valve disc.

1. True
2. False\*

8. During the exhalation valve test, if valve is operating properly, \_\_\_\_\_\_\_\_\_\_ is indicated on the pressure gauge.

1. -40 mbar
2. -30 mbar
3. -20 mbar
4. -10 mbar\*

9. The EPDM breathing hoses use \_\_\_\_\_\_\_\_\_\_.

1. Apache Rings
2. Diamond Rings
3. Bayonet Rings\*
4. Wedding Rings

10. During testing of the inhalation valve, if valve is operating properly, +10 mbar is indicated on the RZ-25 tester.

1. True
2. False\*

11. During the positive pressure leak test, the pressure change within 1 minute must be lower than \_\_\_\_\_\_\_\_\_\_.

1. 2 mbar
2. 1 mbar\*
3. 3 mbar
4. 4 mbar

12. Only \_\_\_\_\_\_\_\_\_\_ is to be used to fill the refillable cartridge.

1. Crodalime
2. Dragersorb 300
3. Sodasorb
4. Dragersorb 400\*

13. The factory packed cartridge is good for \_\_\_\_\_\_\_\_\_\_ from the manufacture date.

1. 1 years
2. 4 years\*
3. 2 years
4. 3 years

14. A positive pressure in the breathing circuit prevents ambient air from entering the system.

1. True\*
2. False

15. The BG-4 is not approved with a factory/refillable cartridge.

1. True
2. False\*

16. The Sentinel monitoring system comprises a sensor unit, battery, and Sentinel.

1. True
2. False\*

17. A steel cylinder is full at \_\_\_\_\_\_\_\_\_\_ when a + is stamped at hydro test.

1. 3000 psi
2. 2850 psi
3. 3135 psi\*
4. None of the above

18. The BG-4 constant dosage must be \_\_\_\_\_\_\_\_\_\_.

1. 1.4 to 1.8 L/min
2. 1.5 to 1.9 L/min\*
3. 1.4 to 1.7 L/min
4. 1.5 to 1.8 L/min

19. The drain valve should not open at less than 10 mbar.

1. True\*
2. False

20. A fully filled steel oxygen cylinder holds \_\_\_\_\_\_\_\_\_\_ of medical oxygen.

1. 480 liters
2. 420 liters
3. 400 liters
4. 440 liters\*

21. The accuracy of the Sentinel pressure measurement is \_\_\_\_\_\_\_\_\_\_ of the final value.

1. +or- 2%\*
2. +or- 1%
3. +or- 5%
4. +or- 10%

22. Never replace the ice pack in potentially explosive areas.

1. True
2. False\*

23. The weight of a fully charged steel oxygen cylinder is 15kg (33 lbs).

1. True
2. False\*

24. Check the supply of oxygen gas on the Sentinel at intervals of approximately \_\_\_\_\_\_\_\_\_\_.

1. 30 minutes
2. 15 minutes\*
3. 20 minutes
4. 10 minutes

25. During the constant dosage test, the breathing bag is inflated, the RZ-25 tester is set to red dosage, and the pressure relief valve is capped.

1. True\*
2. False

26. During the constant dosage test, the needle of the RZ-25 tester should automatically settle between \_\_\_\_\_\_\_\_\_\_.

1. 1.4 and 1.7 LPM
2. 1.4 and 1.9 LPM
3. 1.5 and 1.7 LPM
4. 1.5 and 1.9 LPM\*

27. The minimum valve provides greater than \_\_\_\_\_\_\_\_\_\_.

1. 20 L/min flow
2. 80 L/min flow\*
3. 40 L/min flow
4. 60 L/min flow

28. The Sentinel has a 5.5 liter volume.

1. True
2. False\*

29. Insert speech diaphragm, install retainer ring and tighten with ¼ inch wrench.

1. True
2. False\*

30. The belt and harness must be dried prior to \_\_\_\_\_\_\_\_\_\_, to prevent growth of mold and fungus.

1. cleaning
2. storage\*
3. wearing
4. removal

31. The pressure reducer must be rebuilt/over-hauled every \_\_\_\_\_\_\_\_\_\_.

1. 10 years
2. 6 years\*
3. 4 years
4. 5 years

32. Symbol X with error code indicates a failed self-check.

1. True\*
2. False

33. The Monitron converts pressure into digital signal.

1. True
2. False\*

34. The cylinder connector and cylinder valve must not be contaminated with \_\_\_\_\_\_\_\_\_\_.

1. mold or fungus
2. explosive gas
3. oil or grease\*
4. dirt

35. Three \_\_\_\_\_\_\_\_\_\_ socket head screws are used in the battery cover of the Sentinel.

1. phillips
2. flat
3. octagon
4. hexagon\*

36. Rubber parts must be particularly protected from direct exposure to \_\_\_\_\_\_\_\_\_\_.

1. oil or grease
2. mold or fungus
3. radiation\*
4. freezing temperatures

37. **Do not** use any solvents, such as acetone, alcohol, benzene, white spirit, trichloroethylene, etc. for cleaning rubber and silicone parts.

1. True\*
2. False

38. The first low pressure warning occurs when the pressure drops to approximately \_\_\_\_\_\_\_\_\_\_.

1. 650 psi
2. 500 psi
3. 700 psi\*
4. 400 psi

39. At the first low pressure warning approximately \_\_\_\_\_\_\_\_\_\_ of the oxygen has been used up.

1. 50%
2. 75%\*
3. 60%
4. 80%

40. The last low pressure warning occurs when the pressure drops to approximately \_\_\_\_\_\_\_\_\_\_.

1. 145 psi\*
2. 180 psi
3. 155 psi
4. 150 psi

41. During the low pressure warning test, the alarm should activate at approximately \_\_\_\_\_\_\_\_\_\_ for a 4 hour apparatus.

1. 800 PSI
2. 500 PSI
3. 650 PSI
4. 700 PSI\*

42. At the last low pressure warning approximately \_\_\_\_\_\_\_\_\_\_ of the oxygen has been used up.

1. 50%
2. 75%
3. 95%\*
4. 80%

43. To start the main alarm, press the Red panic button in center of the Sentinel.

1. True
2. False\*

44. When the first low pressure warning occurs, the alarm sounds intermittently for approximately \_\_\_\_\_\_\_\_\_\_ and the red LED flashes constantly.

1. 60 seconds
2. 10 seconds
3. 30 seconds\*
4. 20 seconds

45. When the last low pressure warning occurs, the alarm sounds constantly without stopping and the red LED flashes intermittently.

1. True
2. False\*

46. Medium pressure in the BG-4 is between \_\_\_\_\_\_\_\_\_\_.

1. 56 psi and 64 psi
2. 57 psi and 65 psi
3. 58 psi and 64 psi\*
4. None of the above

47. Medium pressure is delivered to the minimum valve.

1. True\*
2. False

48. The drain valve opens at more than \_\_\_\_\_\_\_\_\_\_.

1. -10 mbar
2. 10 mbar\*
3. -20 mbar
4. 20 mbar

49. The BG-4 breathing circuit is designed with an air cooler that can be filled with ice to reduce the temperature of the inhaled breath.

1. True\*
2. False

50. Remove the Tally Key to activate the motion sensor.

1. True\*
2. False

51. The venting hole located in the pressure reducer for cooler must point upwards.

1. True
2. False\*

52. All parts which come in contact with the exhaled air must be thoroughly cleaned and disinfected after use.

1. True\*
2. False

53. Disinfect parts by immersing them in a disinfectant bath using Dragersorb 400.

1. True
2. False\*

54. Before washing the minimum valve, it is necessary to isolate the minimum valve with plug.

1. True\*
2. False

55. Attach minimum valve to breathing bag so that the pin of the minimum valve and the mark on the breathing bag line up.

1. True\*
2. False

56. All parts which have been disinfected should be rinsed thoroughly under \_\_\_\_\_\_\_\_\_\_.

1. hot water
2. running water\*
3. rinse water
4. cold water

57. CO2 absorber is not approved for use after indicated expiration date.

1. True\*
2. False

58. The maximum temperature of the air used to dry parts should not go above \_\_\_\_\_\_\_\_\_\_.

1. 70 degree C (158 degree F)
2. 40 degree C (104 degree F)
3. 60 degree C (140 degree F)\*
4. 50 degree C (122 degree F)

59. Replace the \_\_\_\_\_\_\_\_\_\_ pressure O-ring located on the pressure reducer yearly for units which are in constant use.

1. low
2. plastic
3. medium
4. high\*

60. U.S. D.O.T. hydro test composite cylinders every \_\_\_\_\_\_\_\_\_\_.

1. 3 years
2. 5 years\*
3. 7 years
4. None of the above

61. Replace the O-ring at the plug-in coupling at least once every year for units which are in constant use.

1. True\*
2. False

62. The inhalation/exhalation valve should be replaced every \_\_\_\_\_\_\_\_\_\_ for units which are in constant use.

1. 3 years\*
2. 5 years
3. year
4. 2 years

63. The O-ring under the speech diaphragm should be lubricated with Cristolube.

1. True
2. False\*

64. The pressure reducer should be returned to the manufacturer or their agent for complete overhaul after at least \_\_\_\_\_\_\_\_\_\_ usage.

1. 2 years
2. 6 years\*
3. 5 years
4. 3 years

65. A steel oxygen cylinder must be retested by a certified testing facility every 5 years.

1. True\*
2. False

66. The BG-4 is approved for use at temperatures above -5 degree C (23 degree F).

1. True\*
2. False

67. A defective pressure reducer should be returned to the manufacturer or their agent for service as needed.

1. True\*
2. False

68. Only oxygen (medical grade or better) with > 99.5% purity is to be used to fill the BG-4 oxygen cylinders.

1. True\*
2. False

69. The use of ice in the cooling system is only required at ambient temperature above \_\_\_\_\_\_\_\_\_\_.

1. -5 degree C (23 degree F)
2. 10 degree C (50 degree F)
3. 0 degree C (32 degree F)\*
4. 32 degrees C (0 degree F)

70. Pressurized oxygen in contact with oil, grease, or other contamination can result in fire or explosion.

1. True\*
2. False

71. It is safe to use the BG 4 for up to 4 hours with a battery warning 2 Icon.

1. True
2. False\*

72. The battery must be replaced if battery warning 2 Icon is indicated.

1. True\*
2. False

73. A defective \_\_\_\_\_\_\_\_\_\_ is the probable cause if the manual by-pass valve does not blow-off.

1. pressure reducer\*
2. oxygen cylinder
3. Sentinel
4. battery

74. The amber LED flashes to indicate that the Sentinel is operating normally.

1. True
2. False\*

75. Bypass output is \_\_\_\_\_\_\_\_\_\_.

1. 25 L/min
2. 50 L/min\*
3. 100 L/min
4. 70 L/min

76. Relief valve activation is 4 bar or (87 psi).

1. True
2. False\*

77. The oxygen cylinder Burst disc ruptures at \_\_\_\_\_\_\_\_\_\_ (275 bar).

1. 3,135 psi
2. 4,000 psi\*
3. 4,500 psi
4. 4,135 psi

78. Refillable cartridge concerns are over packing and under packing.

1. True\*
2. False

79. The EPDM and silicone masks allow \_\_\_\_\_\_\_\_\_\_ peripheral vision.

1. 75%
2. 80%
3. 100%
4. 90%\*

80. Polycarbonate or Neoprene lenses can be used in the mask.

1. True
2. False\*

81. A minimum of \_\_\_\_\_\_\_\_\_\_ is needed for a Sentinel to perform a proper high pressure leak test.

1. 2800 psi
2. 2600 psi\*
3. 3135 psi
4. 3000 psi

82. The drain valve opens at approximately \_\_\_\_\_\_\_\_\_\_ and is therefore out of the RZ reading range.

1. 10 mbar
2. 15 mbar\*
3. 5 mbar
4. 20 mbar

83. To prepare the ice pack: Fill the ice receptacle with water up to 2 inches from rim Freeze at least 16 hours @ -15 degree C (5 degree F) Fill to rim with water Freeze again for another 8 hours.

1. True\*
2. False

84. If the speech diaphragm is deformed or shows signs of damage, it must be replaced.

1. True\*
2. False

85. The BG-4 Sentinel alarms when the button is briefly pressed.

1. True
2. False\*

86. Press then release the right hand button to display temperature.

1. True\*
2. False

87. **Do not** re-use Factory cartridges.

1. True\*
2. False

88. The breathing hoses are equipped with \_\_\_\_\_\_\_\_\_\_ rings.

1. unbreakable
2. anti-crush\*
3. Bayonet
4. neoprene

89. When conducting component checks use a test pressure between +7 mbar and +10 mbar with a max pressure loss of \_\_\_\_\_\_\_\_\_\_.

1. 2 mbar/min
2. 3 mbar/min
3. 5 mbar/min
4. None of the above\*

90. Only the following batteries are approved for use in the Sentinel: Rayovac, Eveready, Panasonic, Duracell.

1. True
2. False\*