

Name _____

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Chapter 01: Medical Gas Supply Equipment

1. Which of the following are assumptions regarding the kinetic theory of gases?

- I. Gases are composed of discrete molecules.
- II. Gas molecules are in random motion.
- III. All collisions between molecules are elastic in nature.
- IV. Temperature affects the molecular activity.

- a. I
- b. I and II
- c. I, II, and III
- d. I, II, III, and IV

ANSWER:

d

2. If the temperature of a gas decreases:

- a. molecular activity increases
- b. molecular activity decreases
- c. molecular activity remains the same
- d. the concentration gradient increases

ANSWER:

b

3. Elastic collisions between molecules implies that:

- I. there is no net energy transfer
- II. no energy is lost by the collision
- III. no energy is gained by the collision
- IV. net energy remains the same

- a. I
- b. I and II
- c. I, II, and III
- d. I, II, III, and IV

ANSWER:

d

4. Gas pressure will increase with:

- I. an increase in temperature
- II. a decrease in temperature
- III. a decrease in volume
- IV. an increase in volume

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

ANSWER:

a

5. Pressure of a fluid at any point in a closed container is the same as the pressure at another point in the same container.

This best describes:

- a. Henry's law
- b. Fick's law
- c. Pascal's law
- d. Graham's law

ANSWER:

c

6. The most accurate type of barometer is the:

- a. aneroid barometer
- b. mercury barometer
- c. mechanical manometer
- d. none of the above

ANSWER:

b

7. A type of pressure-measuring device used to measure the pressure in a compressed-gas cylinder is a(n):

- a. aneroid barometer
- b. mechanical manometer
- c. strain gauge transducer
- d. Bourdon gauge

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ANSWER: d

8. Gas flows from one point to another because:

- a. of a pressure gradient
- b. of a concentration gradient
- c. of a difference in partial pressure
- d. none of the above

ANSWER: a

9. Under which of the following circumstances will gas flow be greater between two points?

- I. if the pressure difference is large
- II. if the pressure difference is small
- III. if the opening between the points is large
- IV. if the opening between the points is small

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

ANSWER: a

10. As gas velocity increases, lateral pressure decreases. This best describes:

- a. the kinetic theory of gases
- b. Pascal's law
- c. Reynold's equation
- d. Bernoulli's principle

ANSWER: d

11. The principle of viscous shearing and vorticity may be applied to:

- a. gas pressure reduction valves
- b. air/oxygen entrainment devices
- c. measurement of gas flow
- d. measurement of gas pressure

ANSWER: b

12. High air flow with oxygen enrichment (HAFOE) masks operate using:

- a. partial pressure differences
- b. viscous shearing and vorticity
- c. Bernoulli's principle
- d. Pascal's law

ANSWER: b

13. High air flow with oxygen enrichment (HAFOE) masks alter oxygen concentrations by:

- I. changing nozzle size
- II. changing air entrainment port size
- III. changing oxygen liter flow into the mask
- IV. changing air liter flow into the mask

- a. I
- b. I and II
- c. I, II, and III
- d. I, II, III, and IV

ANSWER: b

14. A venturi tube has an expanding radius that does not exceed:

- a. 5 degrees
- b. 10 degrees
- c. 15 degrees
- d. 20 degrees

ANSWER: d

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15. A constant area duct:

- a. has an increasing area as gas moves through the duct
- b. has a decreasing area as gas moves through the duct
- c. has an area that remains the same as gas moves through the duct
- d. none of the above

ANSWER:

c

16. A constant area duct:

- a. maintains forward velocity
- b. decreases pressure for an increase in velocity
- c. increases pressure for a decrease in velocity
- d. none of the above

ANSWER:

a

17. A converging duct:

- a. maintains forward velocity
- b. decreases pressure for an increase in velocity
- c. increases pressure for a decrease in velocity
- d. none of the above

ANSWER:

b

18. Back pressure distal to the point of entrainment in a high air flow with oxygen enrichment (HAFOE) mask will:

- a. increase oxygen concentration
- b. decrease oxygen concentration
- c. have no effect on oxygen concentration
- d. increase the total flow

ANSWER:

b

19. An increase in pressure through a nozzle resulting in no increase in flow best describes:

- a. Bernoulli's principle
- b. the venturi effect
- c. choked flow
- d. Reynold's number

ANSWER:

c

20. When flow is choked, gas velocity is:

- a. sonic
- b. laminar
- c. well behaved
- d. none of the above

ANSWER:

a

21. A gas's velocity is said to be choked when:

- a. velocity can no longer increase
- b. a maximum temperature is reached
- c. pressure is at a maximum
- d. the gas concentration is at a maximum

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ANSWER: a

22. A Reynold's number calculation is performed, and the Reynold's number is 5,000. How would this flow be described?

- a. laminar
- b. transitional
- c. turbulent
- d. none of the above

ANSWER: c

23. A Reynold's number calculation is performed, and the Reynold's number is 1,500. How would this flow be described?

- a. laminar
- b. transitional
- c. turbulent
- d. none of the above

ANSWER: a

24. A Reynold's number calculation is performed, and the Reynold's number is 2,500. How would this flow be described?

- a. laminar
- b. transitional
- c. turbulent
- d. none of the above

ANSWER: b

25. A 12-mm endotracheal tube is removed and replaced with a 6-mm endotracheal tube. What is the effect on resistance?

- a. Resistance remains the same.
- b. Resistance doubles.
- c. Resistance decreases.
- d. Resistance increases 16 times.

ANSWER: d

26. You double the length of an oxygen tube by adding 5 feet of connecting tubing. Adding the additional tubing has what effect on resistance to flow?

- a. Resistance remains the same.
- b. Resistance decreases.
- c. Resistance increases.
- d. none of the above

ANSWER: c

27. Which of the following are factors in Poiseuille's law?

- I. length
- II. radius
- III. pressure
- IV. viscosity

- a. I
- b. I and II
- c. I, II, and III
- d. I, II, III, and IV

ANSWER: d

28. Given the following, calculate the new volume:

Initial pressure 645 mmHg
Initial volume 3 L
New pressure 720 mmHg

- a. 1.69 L
- b. 2.69 L
- c. 3.35 L
- d. 4.69 L

ANSWER: b

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29. Given the following, solve for the new volume:

Initial pressure 645 mmHg
Initial volume 2 L
New pressure 800 mmHg

- | | | | |
|----|--------|----|--------|
| a. | 0.61 L | b. | 1.61 L |
| c. | 2.41 L | d. | 4.61 L |

ANSWER: b

30. Given the following, solve for the new volume:

Initial volume 10 L
Initial temperature 30 degrees Celsius
New temperature 100 degrees Celsius

- | | | | |
|----|---------|----|---------|
| a. | 12.31 L | b. | 10.38 L |
| c. | 13.33 L | d. | 15.0 L |

ANSWER: a

31. Given the following, solve for the new temperature:

Initial volume 9 L
Initial temperature 24 degrees Celsius
New volume 3 L

- | | | | |
|----|---------------------|----|----------------------|
| a. | 174 degrees Celsius | b. | 0 degrees Celsius |
| c. | -50 degrees Celsius | d. | -174 degrees Celsius |

ANSWER: d

32. Given the following gas mixture and total pressure, calculate the partial pressure for carbon dioxide:

Oxygen 10%
Carbon dioxide 20%
Nitrogen 70%
Total pressure 760 mmHg

- | | | | |
|----|-----------|----|-------------------|
| a. | 76.0 mmHg | b. | 152.0 mmHg |
| c. | 532 mmHg | d. | none of the above |

ANSWER: b

33. Given the following gas mixture and total pressure, calculate the partial pressure for oxygen:

Oxygen 10%
Carbon dioxide 20%
Nitrogen 70%
Total pressure 760 mmHg

- | | | | |
|----|-----------|----|-------------------|
| a. | 76.0 mmHg | b. | 152.0 mmHg |
| c. | 532 mmHg | d. | none of the above |

ANSWER: a

34. The atmospheric pressure is 740 mmHg (Salt Lake City, UT). What is the partial pressure for oxygen?

- | | | | |
|----|----------|----|-------------------|
| a. | 159 mmHg | b. | 134 mmHg |
| c. | 94 mmHg | d. | none of the above |

ANSWER: b

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35. You are at sea level working in the NBRC Hospital. What is the partial pressure for oxygen?

- a. 159 mmHg
- b. 134 mmHg
- c. 94 mmHg
- d. none of the above

ANSWER:

a

36. Given the following, solve for the new temperature:

Initial pressure 760 mmHg
Initial temperature 10 degrees Celsius
New pressure 435 mmHg

- a. 111 degrees Celsius
- b. 11 degrees Celsius
- c. -75 degrees Celsius
- d. -111 degrees Celsius

ANSWER:

d

37. Given the following, calculate the initial temperature:

Initial pressure 700 mmHg
Initial volume 10 L
New pressure 650 mmHg
New volume 40 L
New temperature 32 degrees C

- a. 66 degrees Celsius
- b. 0 degrees Celsius
- c. -173 degrees Celsius
- d. -273 degrees Celsius

ANSWER:

d

38. Given the following, calculate the initial temperature:

Initial pressure 500 mmHg
Initial volume 9 L
New pressure 9,000 mmHg
New volume 32 L
New temperature 35 degrees Celsius

- a. 134 degrees Celsius
- b. 13 degrees Celsius
- c. -229 degrees Celsius
- d. 273 degrees Celsius

ANSWER:

c

39. According to Graham's law, carbon dioxide when compared with oxygen is:

- a. more soluble in blood
- b. less soluble in blood
- c. has the same solubility at the same pressures
- d. none of the above

ANSWER:

a

40. The rate of diffusion of a gas into or out of a liquid is directly proportional to the partial pressure of that gas. This best describes:

- a. Fick's law
- b. Henry's law
- c. Dalton's law
- d. Graham's law

ANSWER:

b

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41. The rate of diffusion of a gas in a gaseous medium is directly proportional to the concentration gradient. This best describes:

- a. Fick's law
- b. Henry's law
- c. Dalton's law
- d. Graham's law

ANSWER:

a

42. A common type of compressor used to power home nebulizers is a:

- a. piston compressor
- b. centrifugal compressor
- c. diaphragm compressor
- d. two-stage compressor

ANSWER:

c

43. A type of compressor used to supply a hospital or large clinic with compressed air is the:

- a. piston compressor
- b. centrifugal compressor
- c. diaphragm compressor
- d. two-stage compressor

ANSWER:

b

44. An oxygen concentrator works using the principle of:

- a. absorption
- b. chemical reaction to form oxygen
- c. compression
- d. adsorption

ANSWER:

d

45. As a general rule, you should not add more than how many feet of extension tube to an oxygen concentrator?

- a. 10 feet
- b. 20 feet
- c. 30 feet
- d. 50 feet

ANSWER:

d

46. What factors should you consider when placing an oxygen concentrator into a patient's home?

I. Know how large of an electrical load is allowed on the circuit you wish to use.

II. Keep the concentrator away from loose draperies.

III. Keep the concentrator away from heat vents, registers, or baseboard heaters.

IV. Place the concentrator centrally within the home if possible.

- a. I
- b. I and II
- c. I, II, and III
- d. I, II, III, and IV

ANSWER:

d

47. Which of the following oxygen concentrators has an attachment that can fill portable oxygen cylinders?

- a. AirSep VisionAire3™
- b. Invacare Perfecto2 V
- c. AirSep NewLife Intensity
- d. Invacare Platinum 10

ANSWER:

b

48. What precautions must you use when using the HomeFill II compressor with the Invacare Perfecto2 V concentrator?

- a. A separate power source (outlet) must be available.
- b. It must be kept away from any heat source.

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- c. Only 3,500 psi cylinders may be filled.
- d. none of the above

ANSWER:

a

49. When filling a portable reservoir from a liquid reservoir for home use, you should be cautious because:

- a. it will spontaneously ignite
- b. it will not last as long as compressed oxygen in a cylinder
- c. it is at a -183 degrees Celsius
- d. it is under very high pressure

ANSWER:

c

50. When making the decision to use a liquid system for a patient's home, it is important to:

- a. ensure that gas usage exceeds the rate of evaporation
- b. ensure that the patient doesn't need more than 2 L/min flow
- c. ensure that the liquid reservoir is located away from draperies
- d. ensure that only high-pressure liquid reservoirs are installed

ANSWER:

a

51. Which of the following oxygen concentrators are portable?

- I. AirSep VisionAire3™
- II. AirSep FreeStyle™
- III. Invacare Perfecto2 V
- IV. Invacare SOLO2

- a. I and III
- b. I and IV
- c. II and III
- d. II and IV

ANSWER:

a

52. Which of the following portable liquid reservoirs incorporates a pneumatic conserving device?

- a. Invacare Perfecto2 V
- b. AirSep VisionAire3™
- c. Caire HELiOS®
- d. none of the above

ANSWER:

c

53. You are determining the weight of a portable reservoir, and you determine that it contains 10 lbs of liquid oxygen. This is equivalent to:

- a. 100 L gaseous oxygen
- b. 1,000 L of gaseous oxygen
- c. 3,428 L of gaseous oxygen
- d. 5,430 L of gaseous oxygen

ANSWER:

c

54. When using the weight of a portable reservoir to determine its duration, you should apply a "safety factor" of:

- a. 5%
- b. 10%
- c. 15%
- d. 20%

ANSWER:

d

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55. The standards for construction of a bulk supply piping system is regulated by:

- a. the Food and Drug Administration (FDA)
- b. the Department of Transportation (DOT)
- c. the Compressed Gas Association (CGA)
- d. the National Fire Protection Association (NFPA)

ANSWER:

d

56. Types of bulk supply systems include:

- I. liquid main supply with a liquid reserve
- II. liquid main supply with a cylinder manifold reserve
- III. cylinder manifold main supply with a cylinder manifold reserve

- a. I
- b. I and II
- c. II and III
- d. I, II, and III

ANSWER:

d

57. A bulk oxygen supply system's tubing is made from:

- a. polyvinyl chloride (PVC)
- b. galvanized steel
- c. stainless steel
- d. copper

ANSWER:

d

58. Once a bulk supply system's piping has passed the pressure test, it is important to check the oxygen outlets for:

- a. a pressure less than 25 psi
- b. purity
- c. a pressure greater than 200 psi
- d. none of the above

ANSWER:

b

59. A zone valve controls oxygen flow:

- a. to a ward or wing of a building
- b. between floors
- c. from the main reservoir to the building
- d. none of the above

ANSWER:

a

60. A riser valve controls oxygen flow:

- a. to a ward or wing of a building
- b. between floors
- c. from the main reservoir to the building
- d. none of the above

ANSWER:

a

61. Most oxygen alarm panels are located:

- a. at the main entrance to the facility
- b. where the oxygen enters the building
- c. at the respiratory care department
- d. at the switchboard

ANSWER:

d

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62. Station outlets may consist of:

- I. Diameter Index Safety System (DISS) fittings
- II. American Standard Safety System (ASSS) fittings
- III. quick connect fittings

- a. I only
- b. I and II only
- c. II and III only
- d. I and III only

ANSWER: d

63. The diameter index safety system (DISS):

- I. uses different pitches and threads per inch
- II. uses internal and external threads
- III. is intended for low pressure (< 200 psi)
- IV. is intended for high pressure (> 200 psi)

- a. I
- b. I and II
- c. I, II, and III
- d. I, II, III, and IV

ANSWER: c

64. Upon inspection you note the letter and number combination of 3AA stamped into an oxygen cylinder's shoulder. This means:

- a. the cylinder may be used for 3 hours
- b. the cylinder is made of chrome molybdenum steel
- c. the cylinder is made of aluminum
- d. the cylinder is of a fiber-wrapped aluminum construction

ANSWER: b

65. Upon inspection you do not see the letter and number combination of 3AL stamped into an oxygen cylinder's shoulder. This means:

- a. the cylinder may be used for 3 hours
- b. the cylinder is made of chrome molybdenum steel
- c. the cylinder is made of aluminum
- d. the cylinder is of a fiber-wrapped aluminum construction

ANSWER: c

66. A fiber-wrapped aluminum oxygen cylinder may be filled to:

- a. 2,200 psi
- b. 2,500 psi
- c. 3,000 psi
- d. 3,500 psi

ANSWER: c

67. During hydrostatic testing, a cylinder is filled to:

- a. 1/3 the service pressure
- b. 4/3 the service pressure
- c. 5/3 the service pressure
- d. 9/5 the service pressure

ANSWER: c

68. If a hydrostatic test date has a "+" sign following it:

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- a. the cylinder must be tested in 5 years
- b. the cylinder must be tested in 10 years
- c. the cylinder must be tested in 15 years
- d. the cylinder must be tested in 17 years

ANSWER:

b

69. Which of the following are true regarding a 3AA “E” size oxygen cylinder?

- I. The cylinder contains 22 cubic feet when full.
- II. The cylinder contains 244 cubic feet when full.
- III. The cylinder may be filled to 2,200 psi.
- IV. The cylinder may be filled to 3,000 psi.

- | | |
|---------------|--------------|
| a. I and III | b. I and IV |
| c. II and III | d. II and IV |

ANSWER:

a

70. Which of the following are true regarding a 3AA “H” size oxygen cylinder?

- I. The cylinder contains 22 cubic feet when full.
- II. The cylinder contains 244 cubic feet when full.
- III. The cylinder may be filled to 2,200 psi.
- IV. The cylinder may be filled to 3,000 psi.

- | | |
|---------------|--------------|
| a. I and III | b. I and IV |
| c. II and III | d. II and IV |

ANSWER:

c

71. The international color code for oxygen is:

- | | |
|----------|----------|
| a. gray | b. brown |
| c. green | d. white |

ANSWER:

d

72. Which of the following should be observed when moving an “H” cylinder of oxygen?

- I. Leave the valve cap on.
- II. Don’t lift the cylinder by its cap.
- III. Don’t slide or drag the cylinder.
- IV. Don’t drop the cylinder.

- | | |
|-------------------|-----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III, and IV |

ANSWER:

d

73. Which of the following should be observed when storing cylinders?

- I. Post the names of gases being stored.
- II. Keep empty and full cylinders separate.
- III. Use chains to secure the cylinders to the wall.
- IV. Do not store flammable substances with the cylinders.

- | | |
|-------------------|-----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III, and IV |

ANSWER:

d

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74. Which of the following should be observed when withdrawing cylinder contents?

I. Leave the cylinder cap in place until you attach a regulator or reducing valve.

II. Follow all safety precautions.

III. Do not force any threaded connections.

IV. Open cylinder valves slowly.

- | | |
|-------------------|-----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III, and IV |

ANSWER:

d

75. You are setting a patient up on a non-rebreathing mask at a liter flow of 10 L/min. The “H” cylinder you are using reads 1,700 psi. How long will the cylinder last until you need to change it at 500 psi?

- | | |
|------------|------------|
| a. 3 hours | b. 4 hours |
| c. 5 hours | d. 6 hours |

ANSWER:

d

76. You are about to transport a patient from computerized tomography (CT) to the intensive care unit who is being bagged with a bag-mask. You set the liter flow at 15 L/min. The cylinder reads 1,000 psi. How long do you have before the cylinder is empty?

- | | |
|---------------|---------------|
| a. 14 minutes | b. 16 minutes |
| c. 18 minutes | d. 20 minutes |

ANSWER:

c

77. You are working with an outpatient who needs to go home on an “E” cylinder. She is wearing a nasal cannula at 2 L/min, and her cylinder has 1,500 psi remaining. She needs to travel by car one and one-half hours to reach her home and her concentrator. Can she make it?

- | | |
|--------|-------|
| a. yes | b. no |
|--------|-------|

ANSWER:

a

78. You need to transport a patient by helicopter to your home base one and one-half hours away. You are using a bag-mask at a liter flow of 15 L/min. How many full “E” cylinders do you need for the transport?

- | | |
|----------|---------|
| a. one | b. two |
| c. three | d. four |

ANSWER:

c

79. Which of the following are true regarding a direct-acting cylinder valve?

I. It acts directly on the valve seat.

II. Turning the valve stem moves a diaphragm.

III. It is used on large cylinders (H or K).

IV. It is used on small cylinders (E).

- | | |
|---------------|--------------|
| a. I and III | b. I and IV |
| c. II and III | d. II and IV |

ANSWER:

b

80. Which of the following are true regarding a direct-acting cylinder valve?

I. It acts directly on the valve seat.

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II. Turning the valve stem moves a diaphragm.

III. It is used on large cylinders (H or K).

IV. It is used on small cylinders (E).

- | | |
|---------------|--------------|
| a. I and III | b. I and IV |
| c. II and III | d. II and IV |

ANSWER:

c

81. Which of the following are safety features of cylinder valves?

I. American Standard Safety System threading

II. pin index safety system connections

III. fusible plugs

IV. frangible disks

- | | |
|-------------------|-----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III, and IV |

ANSWER:

d

82. Which of the following safety features may be incorporated into a reducing valve?

I. American standard safety system threads

II. pin index safety system connections

III. diameter index safety system threads

IV. a pressure relief for each stage of pressure reduction

- | | |
|-------------------|----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III and IV |

ANSWER:

d

83. A modified single-stage reducing valve is similar to a single-stage reducing valve with the exception of:

- | | |
|-------------------------------------|------------------------------------|
| a. It can deliver higher pressures. | b. It has a larger outlet. |
| c. It has a larger inlet. | d. It has a poppet closing spring. |

ANSWER:

d

84. Which of the following are advantages of a two-stage reducing valve compared with a single-stage reducing valve?

I. Higher flows may be provided.

II. More accurate pressure regulation is possible.

III. Stable high flow rates are possible.

IV. It is more compact than a single-stage reducing valve.

- | | |
|-------------------|-----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III, and IV |

ANSWER:

c

85. A flowmeter attached to a reducing valve is known as a:

- | | |
|---------------------------|-----------------------------|
| a. complex reducing valve | b. two-stage reducing valve |
| c. regulator | d. none of the above |

ANSWER:

c

86. Air-oxygen blenders operate using:

- | | |
|-----------------------------------|--------------------------|
| a. viscous shearing and vorticity | b. Bernoulli's principle |
|-----------------------------------|--------------------------|

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c. proportioning valves

d. two-stage reducing valves

ANSWER:

c

87. Prior to gas entering the proportioning valve of an air-oxygen blender, it is important that:

a. air and oxygen pressure are equal

b. a two-stage reducing valve is connected to the blender's inlet

c. a single-stage reducing valve is connected to the blender's inlet

d. that both gas inlets are connected to oxygen

ANSWER:

a

88. Advantages of a Bourdon gauge flowmeter include which of the following?

I. It is very compact.

II. It works in any position.

III. It is accurate in the presence of back pressure.

IV. It is back-pressure compensated.

a. I

b. I and II

c. I, II, and III

d. I, II, III, and IV

ANSWER:

b

89. In the presence of back pressure, a Bourdon gauge flowmeter will:

a. not be affected

b. read higher than the actual flow delivered

c. read lower than the actual flow delivered

d. none of the above

ANSWER:

b

90. When using a Bourdon gauge flowmeter, it is important to:

a. only operate it in the upright position

b. only operate it when you can see the gauge

c. be certain all tubing is free of kinks or obstructions

d. adjust the inlet pressure to 50 psi prior to the single-stage reducing valve entrance

ANSWER:

c

91. Fixed orifice flowmeters operate by:

a. the orifice size determining gas flow

b. the pressure set proximal to the orifice determining gas flow

c. the venturi principle

d. balancing pressures across a proportioning valve

ANSWER:

a

92. Which of the following are true regarding an uncompensated Thorpe tube flowmeter?

I. The needle valve is proximal to the Thorpe tube.

II. The needle valve is distal to the Thorpe tube.

III. The flowmeter reads accurately in the presence of back pressure.

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IV. The flowmeter reads higher in the presence of back pressure.

- | | |
|---------------|--------------|
| a. I and III | b. I and IV |
| c. II and III | d. II and IV |

ANSWER:

b

93. Which of the following are true regarding a compensated Thorpe tube flowmeter?

- I. The needle valve is proximal to the Thorpe tube.
- II. The needle valve is distal to the Thorpe tube.
- III. The flowmeter reads accurately in the presence of back pressure.
- IV. The flowmeter reads higher in the presence of back pressure.

- | | |
|---------------|--------------|
| a. I and III | b. I and IV |
| c. II and III | d. II and IV |

ANSWER:

c

94. How can you determine if you have a compensated Thorpe tube flowmeter?

- I. The needle valve is proximal to the Thorpe tube.
- II. The needle valve is distal to the Thorpe tube.
- III. The ball “jumps” in the Thorpe tube when connected to 50 psi.
- IV. The label states “calibrated 760 mmHg, 70 degrees F, 50 psi inlet and outlet pressure.”

- | | |
|---------------|--------------------|
| a. I and III | b. I, III, and IV |
| c. II and III | d. II, III, and IV |

ANSWER:

d

95. A pediatric flowmeter is calibrated from:

- | | |
|------------------|----------------------|
| a. 0 to 3 L/min | b. 0 to 15 L/min |
| c. 0 to 75 L/min | d. none of the above |

ANSWER:

a

96. Pulse demand delivery devices are advantageous because:

- I. they only deliver oxygen during inspiration
- II. they can conserve large amounts of oxygen
- III. they work well with ambulatory patients

- | | |
|---------------|-------------------|
| a. I | b. I and II |
| c. II and III | d. I, II, and III |

ANSWER:

d

97. When troubleshooting a pulse demand oxygen device, you should check:

- I. the oxygen cylinder for sufficient pressure
- II. the battery for proper voltage (charge)
- III. the battery for proper installation
- IV. the cannula for kinks or obstructions

- | | |
|-------------------|-----------------------|
| a. I | b. I and II |
| c. I, II, and III | d. I, II, III, and IV |

ANSWER:

d

98. Which of the following liquid systems do not need to be refilled?

Name _____ Class _____ Date _____
: _____ : _____ e: _____

Chapter 01: Medical Gas Supply Equipment

- a. Caire HELiOS[®]
- b. Caire Liberator[®]
- c. Caire Stroller[®]
- d. Respironics HomeLox

ANSWER:

d