

Final Exam Review: Chp 2,3 & 4

1-10 Identify the following as :

a) Physical Change **b)** Chemical Change

1. Sodium hydroxide dissolves in water
- 2 Hydrochloric acid reacts with sodium hydroxide to produce a salt, water & heat.
3. A pellet of sodium is sliced in two
4. Water is heated and changed into steam.
5. Potassium chlorate decomposes to potassium chloride and oxygen gas
6. Iron rusts
7. Ice melts
8. Acid on limestone produces carbon dioxide gas.
9. Milk sours
10. Wood rots

11-25 Identify the following as :

a) Physical Property **b)** Chemical Property

11. red color
12. density
13. flammability
14. solubility
15. reacts with acid to form hydrogen
16. bitter taste
17. melting point
18. reacts with water to form a gas
19. combustible
20. conductivity
21. hardness
22. boiling point
23. malleability
24. odor
25. reacts with a base to form water

DEFINITIONS: USE CHOICES A-E BELOW FOR QUESTIONS 26-30

Use them only once.

- A.** This is the amount of matter in an object and is always constant
B. this is the amount of space the object occupies
C. this is a measure of the gravitational force, and it will change, depending on where the object is located away from Earth
D. this is the amount of mass in a given volume
E. mass is a measure of this

26. Define: weight
27. Define: mass
28. Define: density
29. Define: inertia
30. Define: volume

USE CHOICES A-E BELOW FOR QUESTIONS 31-35 Use them only once.

- A:** definite volume, not a definite shape
B: no definite shape or volume
C: approaches absolute zero
D: particles that are broken apart, and do not have a definite shape or volume
E: definite shape and definite volume

31. A solid state has:
32. A liquid state has:
- 33, A plasma state has:
34. A gas state has:
35. A Bose Einstein state

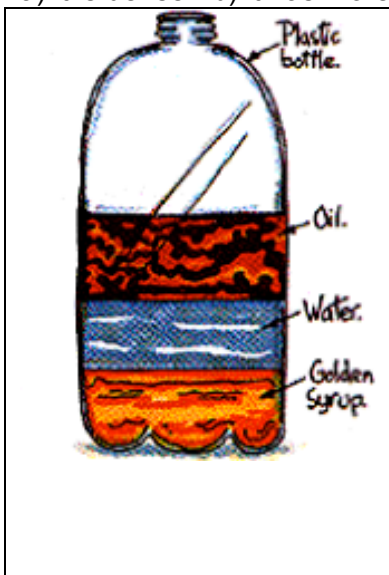
36. A solid object floats in water when it is:
 a. light b. heavy c. more dense than water. d. less dense than water

37. Density is:
 a) the tendency of all objects to resist change c) a force of attraction between objects
 b) the amount of matter in a given volume d) the amount of space an object takes up

38. The density of water is:
 a) 0.1 g/cm^3 b) 1 g/cm^3 c) 10 g/cm^3 d) it changes constantly

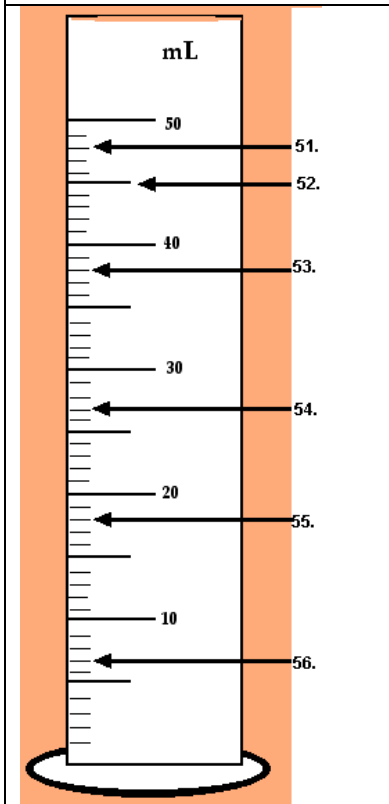
39. The equation for density is:
 a) $V = D/m$ b) $D=m/V$ c) $D=V/m$ d) $M=V/D$ e) none of these

40. Why does a golf ball feel heavier than a tennis ball?
 a) it is denser b) it has more volume c) it has less mass d) all of the above



41-50 : A: TRUE B: FALSE : use the drawing on the left

41. Oil is the most dense liquid in the bottle.
 42. Water is more dense than syrup
 43. Water is more dense than oil
 44. Oil is more dense than syrup
 45. golden syrup is the most dense liquid in the bottle
 46. oil's density is more than 1 g/cm^3
 47. oil's density is less than 1 g/cm^3
 48. water's density is more than 1 g/cm^3
 49. syrup's density is less than 1 g/cm^3
 50. syrup's density is more than 1 g/cm^3



Use the graduated cylinder to answer questions 51-56.

- 51. the reading at this point is:**
 A. 52.0 B. 48.0 C. 40.8 d. 41.6 e. none of these
- 52. the reading for this point is:**
 A. 45.0 B. 41.0 C. 55.0 D. 40.5 e. none of these
- 53. the reading for this point is:**
 A. 42.0 B. 35.3 C. 30.8 D. 38.0 e. none of these
- 54. the reading for this point is:**
 A. 33.0 B. 25.3 C. 30.3 D. 27.0 e. none of these
- 55. the reading for this point is:**
 A. 10.8 B. 22.0 C. 18.0 D. 20.2 e. none of these
- 56. the reading for this point is:**
 A. .7 B 7.0 C. 13.0 D. 10.3 e. none of these

match the definition at the right:	use only once:
57. Solid	a) exists at high temperatures
58. Liquid	b) definite volume, definite shape
59. Gas	c) exists at very low temperatures
60. Plasma	d) definite volume , no definite shape
61. Bose-Einstein Condensate	e) no definite volume, no definite shape

MATCH THE DEFINITION Write the letter

62. solubility: _____	A. elements that are shiny and are good conductors of thermal and electrical energy. Most are malleable and ductile
63. suspension: _____	B. a pure substance composed of two or more elements that are chemically combined
64. concentration: _____	C. a substance in which there is only one type of particle; includes elements and compounds
65. alloys: : _____	D. elements that have properties of both metals and nonmetals; sometimes referred to as semiconductors
66. colloid: : _____	E. a combination of two or more substances that are not chemically combined
67. element: : _____	F. a pure substance that can not be separated or broken down into simpler substances by physical means
68. solvent: : _____	G. elements that are dull (not shiny) and that are poor conductors of thermal and electrical energy
69. solute: : _____	H. a mixture in which particles of a material are dispersed throughout a liquid or gas but are large enough that they settle out
70. metalloids: : _____	I. a mixture in which the particles are dispersed throughout but are not heavy enough to settle out
71. mixture: : _____	J. a measure of the amount of solute dissolved in a solvent
72. solution: _____	K. solid solutions of metals or nonmetals dissolved in metals
73. compound: : _____	L. the ability to dissolve in another substance
74. metals: _____	M. the substance in which a solute is dissolved to form a solution
75. pure substance: _____	N. a mixture hat appears to be a single substance but is composed of particles of two or more substances that are distributed evenly amongst each other
76. nonmetals: _____	O. the substance that is dissolved to form a solution

Match the properties listed to the right to one of these a. mixtures b. compounds	77. : _____ components keep their original properties
	78. : _____ components lose their original properties
	79. : _____ separated by physical means
	80. : _____ separated by chemical means
	81. : _____ tossed salad
	82. : _____ sugar water
83. : _____ pizza	

Choose from these answers (use only once) a. heterogeneous matter b. homogeneous matter c. solution d. substances	84. _____ Elements & compounds are classified as _____.
	85. _____ A(n) _____ is not a substance but is homogeneous.
	86. _____ _____ is made of two or more different materials that are not distributed evenly throughout each other
	87. _____ _____ is any matter that is the same throughout.

Choose from: a. heterogeneous b. homogeneous	88. distilled water : _____
	89. concrete : _____
	90. aluminum foil: _____
	91. tea: _____
	92. blood: _____
	93. Kool-Aid: _____

Identify these as: Colloid, Solutions or Suspensions??	
94. grape jelly : _____ 94. instant coffee : _____ 96. muddy water : _____ 97. whipped cream: _____	Choose from: a. Colloid b. solutions c. suspensions

Use the letters on the graph to the right to match the following terms below for questions 40-44 98. gas 99. freezing 100. liquid 101. condensation 102. solid	<p style="text-align: center;">Cooling Curve of Water</p> <p>The graph shows the cooling curve of water. The y-axis is Temperature (°C) with markers at 0 and 100. The x-axis is Time. The curve starts at a high temperature, decreases linearly to 100°C (point A), remains constant at 100°C (point B), decreases linearly to 0°C (point C), remains constant at 0°C (point D), and finally decreases linearly below 0°C (point E).</p>
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