

## Final Exam Review: Chp 2,3 & 4

**1-10 Identify the following as :**

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

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

**11-25 Identify the following as :**

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

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

- C** 26. Define: weight
- A** 27. Define: mass
- D** 28. Define: density
- E** 29. Define: inertia
- B** 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

- E** 31. A solid state has:
- A** 32. A liquid state has:
- D** 33, A plasma state has:
- B** 34. A gas state has:
- C** 35. A Bose Einstein state

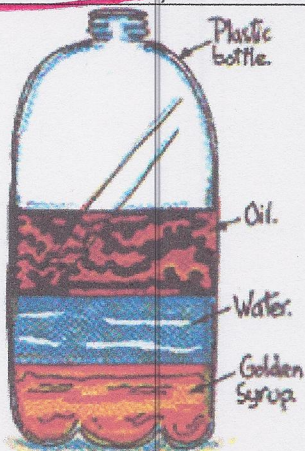
36. A solid object floats in water when it is: **D**  
 a. light    b. heavy    c. more dense than water.    **d. less dense than water**

37. Density is: **B**  
 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: **B**  
 a)  $0.1 \text{ g/cm}^3$     **b)  $1 \text{ g/cm}^3$**     c)  $10 \text{ g/cm}^3$     d) it changes constantly

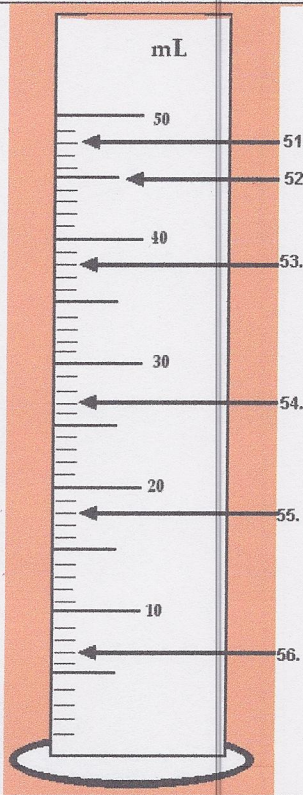
39. The equation for density is: **B**  
 a)  $V = D/m$     **b)  $D=m/V$**     c)  $D=V/m$     d)  $M=V/D$     e) none of these

40. Why does a golf ball feel heavier than a tennis ball? **A**  
**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. **B**  
 42. Water is more dense than syrup **B**  
 43. Water is more dense than oil **A**  
 44. Oil is more dense than syrup **B**  
 45. golden syrup is the most dense liquid in the bottle **A**  
 46. oil's density is more than  $1 \text{ g/cm}^3$  **B**  
 47. oil's density is less than  $1 \text{ g/cm}^3$  **A**  
 48. water's density is more than  $1 \text{ g/cm}^3$  **B**  
 49. syrup's density is less than  $1 \text{ g/cm}^3$  **B**  
 50. syrup's density is more than  $1 \text{ g/cm}^3$  **A**



**Use the graduated cylinder to answer questions 51-56.**

51. the reading at this point is: **B**  
 A. 52.0    **B. 48.0**    C. 40.8    d. 41.6    e. none of these

52. the reading for this point is: **A**  
**A. 45.0**    B. 41.0    C. 55.0    D. 40.5    e. none of these

53. the reading for this point is: **D**  
 A. 42.0    B. 35.3    C. 30.8    **D. 38.0**    e. none of these

54. the reading for this point is: **D**  
 A. 33.0    B. 25.3    C. 30.3    **D. 27.0**    e. none of these

55. the reading for this point is: **C**  
 A. 10.8    B. 22.0    **C. 18.0**    D. 20.2    e. none of these

56. the reading for this point is: **B**  
 A. .7    **B 7.0**    C. 13.0    D. 10.3    e. none of these

**match the definition at the right:**

57. Solid **B**  
58. Liquid **D**  
59. Gas **E**  
60. Plasma **A**  
61. Bose-Einstein Condensate **C**

**use only once:**

- a) exists at high temperatures  
b) definite volume, definite shape  
c) exists at very low temperatures  
d) definite volume, no definite shape  
e) no definite volume, no definite shape

**MATCH THE DEFINITION** Write the letter

62. solubility:   **L**  

63. suspension:   **H**  

64. concentration:   **J**  

65. alloys: :   **K**  

66. colloid: :   **I**  

67. element: :   **F**  

68. solvent: :   **M**  

69. solute: :   **O**  

70. metalloids: :   **D**  

71. mixture: :   **E**  

72. solution:   **N**  

73. compound: :   **B**  

74. metals:   **A**  

75. pure substance:   **C**  

76. nonmetals:   **G**  

A. elements that are shiny and are good conductors of thermal and electrical energy. Most are malleable and ductile

B. a pure substance composed of two or more elements that are chemically combined

C. a substance in which there is only one type of particle; includes elements and compounds

D. elements that have properties of both metals and nonmetals; sometimes referred to as semiconductors

E. a combination of two or more substances that are not chemically combined

F. a pure substance that can not be separated or broken down into simpler substances by physical means

G. elements that are dull (not shiny) and that are poor conductors of thermal and electrical energy

H. a mixture in which particles of a material are dispersed throughout a liquid or gas but are large enough that they settle out

I. a mixture in which the particles are dispersed throughout but are not heavy enough to settle out

J. a measure of the amount of solute dissolved in a solvent

K. solid solutions of metals or nonmetals dissolved in metals

L. the ability to dissolve in another substance

M. the substance in which a solute is dissolved to form a solution

N. a mixture that appears to be a single substance but is composed of particles of two or more substances that are distributed evenly amongst each other

O. the substance that is dissolved to form a solution

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

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

<p>Choose from:</p> <p>a. heterogeneous</p> <p>b. homogeneous</p>	88. distilled water : <u>B</u>
	89. concrete : <u>A</u>
	90. aluminum foil: <u>B</u>
	91. tea: <u>B</u>
	92. blood: <u>A</u>
	93. Kool-Aid: <u>B</u>

Identify these as: Colloid, Solutions or Suspensions??	
94. grape jelly : <u>A</u>	<p>Choose from:</p> <p>a. Colloid</p> <p>b. solutions</p> <p>c. suspensions</p>
94. instant coffee : <u>B</u>	
96. muddy water : <u>C</u>	
97. whipped cream: <u>A</u>	

Use the letters on the graph to the right to match the following terms below for questions 40-44

- A 98. gas
- D 99. freezing
- C 100. liquid
- B 101. condensation
- E 102. solid

