

Name:**Score:** 0 / 75 points (0%) [1 open-ended question not graded]

Chapters 1&2

Multiple Choice

Identify the choice that best completes the statement or answers the question.



- _____ 1. Solids have a _____ shape and are not appreciably _____.
- definite, compressible
 - definite, incompressible
 - indefinite, compressible
 - indefinite, incompressible
 - sharp, convertible

ANSWER: A**POINTS: 0 / 1**

- _____ 2. If matter is uniform throughout and cannot be separated into other substances by physical processes, but can be decomposed into other substances by chemical processes, it is called a (an) _____.
- heterogeneous mixture
 - element
 - homogeneous mixture
 - compound
 - mixture of elements

ANSWER: D**POINTS: 0 / 1**

- _____ 3. A separation process that depends on differing abilities of substances to form gases is called _____.
- filtration
 - solvation
 - distillation
 - chromatography
 - All of the above are correct.

ANSWER: C**POINTS: 0 / 1**

- _____ 4. The SI unit for mass is _____.
- kilogram
 - gram
 - pound
 - troy ounce

e. none of the above

ANSWER: A

POINTS: 0 / 1



5. The SI unit of temperature is _____.

- a. K
- b. °C
- c. °F
- d. t
- e. T

ANSWER: A

POINTS: 0 / 1



6. The temperature of 25°C is _____ in Kelvins.

- a. 103
- b. 138
- c. 166
- d. 248
- e. 298

ANSWER: E

POINTS: 0 / 1



7. An object will sink in a liquid if the density of the object is greater than that of the liquid. The mass of a sphere is 9.83 g. If the volume of this sphere is less than _____ cm³, then the sphere will sink in liquid mercury (density = 13.6 g/cm³).

- a. 0.723
- b. 1.38
- c. 134
- d. 7.48
- e. none of the above

ANSWER: A

POINTS: 0 / 1




8. Osmium has a density of 22.6 g/cm³. The mass of a block of osmium that measures 1.01 cm × 0.233 cm × 0.648 cm is _____ g.

- a. 6.75×10^{-3}
- b. 3.45
- c. 148
- d. 6.75×10^3
- e. 34.5


ANSWER: B

POINTS: 0 / 1

-  _____ 9. The volume of a regular cylinder is $V = \pi r^2 h$. Using the value 3.1416 for the constant π , the volume (cm^3) of a cylinder of radius 2.34 cm and height 19.91 cm expressed to the correct number of significant figures is _____.
- 342.49471
 - 342.495
 - 342.49
 - 343
 - 342


ANSWER: E

POINTS: 0 / 1

-  _____ 10. Which one of the following is a pure substance?
- concrete
 - wood
 - salt water
 - elemental copper
 - milk


ANSWER: D

POINTS: 0 / 1

-  _____ 11. Which one of the following is often easily separated into its components by simple techniques such as filtering or decanting?
- heterogeneous mixture
 - compounds
 - homogeneous mixture
 - elements
 - solutions


ANSWER: A

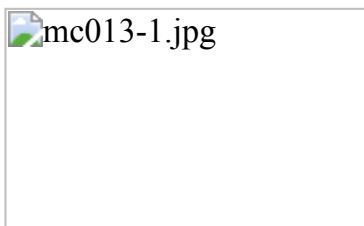
POINTS: 0 / 1

-  _____ 12. Which one of the following is true about the liter?
- It is the SI base unit for volume.
 - It is equivalent to a cubic decimeter.
 - It is slightly smaller than a quart.
 - It contains 10^6 cubic centimeters.
 - It is slightly smaller than a gallon.

ANSWER: B

POINTS: 0 / 1

-  _____ 13. A cube of an unknown metal measures 1.61 mm on one side. The mass of the cube is 36 mg. Which of the following is most likely the unknown metal?



- a. copper
- b. rhodium
- c. niobium
- d. vanadium
- e. zirconium

ANSWER: C

POINTS: 0 / 1



14. Precision refers to _____.
- a. how close a measured number is to other measured numbers
 - b. how close a measured number is to the true value
 - c. how close a measured number is to the calculated value
 - d. how close a measured number is to zero
 - e. how close a measured number is to infinity

ANSWER: A

POINTS: 0 / 1



15. Accuracy refers to _____.
- a. how close a measured number is to zero
 - b. how close a measured number is to the calculated value
 - c. how close a measured number is to other measured numbers
 - d. how close a measured number is to the true value
 - e. how close a measured number is to infinity

ANSWER: D

POINTS: 0 / 1



16. The atomic number indicates _____.
- a. the number of neutrons in a nucleus
 - b. the total number of neutrons and protons in a nucleus
 - c. the number of protons or electrons in a neutral atom
 - d. the number of atoms in 1 g of an element
 - e. the number of different isotopes of an element

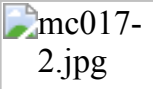
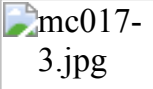
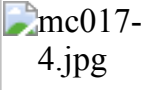
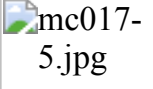
ANSWER: C

POINTS: 0 / 1




17. Which pair of atoms constitutes a pair of isotopes of the same element?

- a. mc017-1.jpg

- b. 
- c. 
- d. 
- e. 


ANSWER: B

POINTS: 0 / 1

-  18. Which group in the periodic table contains only nonmetals?
- 1A
 - 6A
 - 2B
 - 2A
 - 8A


ANSWER: E

POINTS: 0 / 1

-  19. The element _____ is the most similar to strontium in chemical and physical properties.
- Li
 - At
 - Rb
 - Ba
 - Cs


ANSWER: D

POINTS: 0 / 1

-  20. Elements in Group 2A are known as the _____.
- alkaline earth metals
 - alkali metals
 - chalcogens
 - halogens
 - noble gases

ANSWER: A


POINTS: 0 / 1

-  21. Elements in Group 7A are known as the _____.
- chalcogens
 - alkali metals

- c. alkaline earth metals
- d. halogens
- e. noble gases


ANSWER: D

POINTS: 0 / 1

-  _____ 22. Elements in Group 8A are known as the _____.
- a. halogens
 - b. alkali metals
 - c. alkaline earth metals
 - d. chalcogens
 - e. noble gases


ANSWER: E

POINTS: 0 / 1

-  _____ 23. When a metal and a nonmetal react, the _____ tends to lose electrons and the _____ tends to gain electrons.
- a. metal, metal
 - b. nonmetal, nonmetal
 - c. metal, nonmetal
 - d. nonmetal, metal
 - e. None of the above, these elements share electrons .


ANSWER: C

POINTS: 0 / 1

-  _____ 24. _____ typically form ions with a 2+ charge.
- a. Alkaline earth metals
 - b. Halogens
 - c. Chalcogens
 - d. Alkali metals
 - e. Transition metals


ANSWER: A

POINTS: 0 / 1

-  _____ 25. What is the formula of the compound formed between strontium ions and nitrogen ions?
- a. SrN
 - b. Sr₃N₂
 - c. Sr₂N₃
 - d. SrN₂
 - e. SrN₃


ANSWER: B

POINTS: 0 / 1

-  26. Magnesium reacts with a certain element to form a compound with the general formula MgX . What would the most likely formula be for the compound formed between potassium and element X?
- K_2X
 - KX_2
 - K_2X_3
 - K_2X_2
 - KX


ANSWER: A

POINTS: 0 / 1

-  27. Aluminum reacts with a certain nonmetallic element to form a compound with the general formula AlX . Element X is a diatomic gas at room temperature. Element X must be _____.
- oxygen
 - fluorine
 - chlorine
 - nitrogen
 - sulfur


ANSWER: D

POINTS: 0 / 1

-  28. The correct name for SrO is _____.
- strontium oxide
 - strontium hydroxide
 - strontium peroxide
 - strontium monoxide
 - strontium dioxide


ANSWER: A

POINTS: 0 / 1

-  29. The correct name for K_2S is _____.
- potassium sulfate
 - potassium disulfide
 - potassium bisulfide
 - potassium sulfide
 - dipotassium sulfate

ANSWER: D


POINTS: 0 / 1

-  30. The correct name for Al_2O_3 is _____.
- aluminum oxide
 - dialuminum oxide
 - dialuminum trioxide

- d. aluminum hydroxide
- e. aluminum trioxide


ANSWER: A

POINTS: 0 / 1

-  ____ 31. The correct name for CaH_2 is ____.
- a. hydrocalcium
 - b. calcium dihydride
 - c. calcium hydroxide
 - d. calcium dihydroxide
 - e. calcium hydride


ANSWER: E

POINTS: 0 / 1

-  ____ 32. The correct name for SO is ____.
- a. sulfur oxide
 - b. sulfur monoxide
 - c. sulfoxide
 - d. sulfate
 - e. sulfite


ANSWER: B

POINTS: 0 / 1

-  ____ 33. The correct name for CCl_4 is ____.
- a. carbon chloride
 - b. carbon tetrachlorate
 - c. carbon perchlorate
 - d. carbon tetrachloride
 - e. carbon chlorate

ANSWER: D

POINTS: 0 / 1

-  ____ 34. The correct name for N_2O_5 is ____.
- a. nitrous oxide
 - b. nitrogen pentoxide
 - c. dinitrogen pentoxide
 - d. nitric oxide
 - e. nitrogen oxide

ANSWER: C


POINTS: 0 / 1

-  ____ 35. The correct name for H_2CO_3 is ____.

- a. carbonous acid
- b. hydrocarbonate
- c. carbonic acid
- d. carbohydrate
- e. carbohydric acid


ANSWER: C

POINTS: 0 / 1

-  ____ 36. The correct name for H_2SO_3 is _____.
- a. sulfuric acid
 - b. sulfurous acid
 - c. hydrosulfuric acid
 - d. hydrosulfic acid
 - e. sulfur hydroxide


ANSWER: B

POINTS: 0 / 1

-  ____ 37. The correct name for HClO_3 is _____.
- a. hydrochloric acid
 - b. perchloric acid
 - c. chloric acid
 - d. chlorous acid
 - e. hydrochlorous acid


ANSWER: C

POINTS: 0 / 1

-  ____ 38. The correct name for HClO_2 is _____.
- a. perchloric acid
 - b. chloric acid
 - c. hypochlorous acid
 - d. hypychloric acid
 - e. chlorous acid

ANSWER: E


POINTS: 0 / 1

-  ____ 39. The correct name of the compound Na_3N is _____.
- a. sodium nitride
 - b. sodium azide
 - c. sodium trinitride
 - d. sodium(III) nitride
 - e. trisodium nitride

ANSWER: A


POINTS:

POINTS: 0 / 1

-  _____ 40. The formula of bromic acid is _____.
- HBr
 - HBrO₄
 - HBrO
 - HBrO₃
 - HBrO₂


ANSWER: D

POINTS: 0 / 1

-  _____ 41. The correct formula for molybdenum(IV) hypochlorite is _____.
- Mo(ClO₃)₄
 - Mo(ClO)₄
 - Mo(ClO₂)₄
 - Mo(ClO₄)₄
 - MoCl₄


ANSWER: B

POINTS: 0 / 1

-  _____ 42. The name of PCl₃ is _____.
- potassium chloride
 - phosphorus trichloride
 - phosphorous(III) chloride
 - monophosphorous trichloride
 - trichloro potassium


ANSWER: B

POINTS: 0 / 1

-  _____ 43. The correct formula of iron(III) bromide is _____.
- FeBr₂
 - FeBr₃
 - FeBr
 - Fe₃Br₃
 - Fe₃Br

ANSWER: B

POINTS: 0 / 1

-  _____ 44. Element M reacts with fluorine to form an ionic compound with the formula MF₃. The M-ion has 18 electrons. Element M is _____.
- P
 - Sc

- c. Ar
- d. Ca
- e. Cr

ANSWER: B

POINTS: 0 / 1



45. The formula of ammonium carbonate is _____.

- a. $(\text{NH}_4)_2\text{CO}_3$
- b. NH_4CO_2
- c. $(\text{NH}_3)_2\text{CO}_4$
- d. $(\text{NH}_3)_2\text{CO}_3$
- e. $\text{N}_2(\text{CO}_3)_3$

ANSWER: A

POINTS: 0 / 1



46. The correct name for $\text{Mg}(\text{ClO}_3)_2$ is _____.

- a. magnesium chlorate
- b. manganese chlorate
- c. magnesium chloroxide
- d. magnesium perchlorate
- e. manganese perchlorate

ANSWER: A

POINTS: 0 / 1



47. What is the correct formula for ammonium sulfide?

- a. NH_4SO_3
- b. $(\text{NH}_4)_2\text{SO}_4$
- c. $(\text{NH}_4)_2\text{S}$
- d. NH_3S
- e. N_2S_3

ANSWER: C

POINTS: 0 / 1




48. Chromium and chlorine form an ionic compound whose formula is CrCl_3 . The name of this compound is _____.

- a. chromium chlorine
- b. chromium(III) chloride
- c. monochromium trichloride
- d. chromium(III) trichloride
- e. chromic trichloride


ANSWER: B

POINTS: 0 / 1

-  _____ 49. The name of the binary compound N_2O_4 is _____.
- nitrogen oxide
 - nitrous oxide
 - nitrogen(IV) oxide
 - dinitrogen tetroxide
 - oxygen nitride


ANSWER: D

POINTS: 0 / 1

-  _____ 50. The formula for zinc phosphate is $\text{Zn}_3(\text{PO}_4)_2$. What is the formula for cadmium arsenate?
- $\text{Cd}_4(\text{AsO}_2)_3$
 - $\text{Cd}_3(\text{AsO}_4)_2$
 - $\text{Cd}_3(\text{AsO}_3)_4$
 - $\text{Cd}_2(\text{AsO}_4)_3$
 - $\text{Cd}_2(\text{AsO}_4)_4$


ANSWER: B

POINTS: 0 / 1

-  _____ 51. The formula for aluminum hydroxide is _____.
- AlOH
 - Al_3OH
 - $\text{Al}_2(\text{OH})_3$
 - $\text{Al}(\text{OH})_3$
 - Al_2O_3


ANSWER: D

POINTS: 0 / 1

-  _____ 52. The name of the ionic compound KBrO_4 is _____.
- potassium perbromate
 - potassium bromate
 - potassium hypobromate
 - potassium perbromite
 - potassium bromide

ANSWER: A


POINTS: 0 / 1

-  _____ 53. The name of the ionic compound V_2O_3 is _____.
- vanadium(III) oxide
 - vanadium oxide
 - vanadium(II) oxide

- d. vanadium(III) trioxide
- e. divanadium trioxide


ANSWER: A

POINTS: 0 / 1

-  _____ 54. The name of the ionic compound NH_4CN is _____.
- a. nitrogen hydrogen cyanate
 - b. ammonium carbonitride
 - c. ammonium cyanide
 - d. ammonium hydrogen cyanate
 - e. cyanonitride


ANSWER: C

POINTS: 0 / 1

-  _____ 55. The name of the ionic compound $(\text{NH}_4)_3\text{PO}_4$ is _____.
- a. ammonium phosphate
 - b. nitrogen hydrogen phosphate
 - c. tetrammonium phosphate
 - d. ammonia phosphide
 - e. triammonium phosphate


ANSWER: A

POINTS: 0 / 1

-  _____ 56. What is the formula for perchloric acid?
- a. HClO
 - b. HClO_3
 - c. HClO_4
 - d. HClO_2
 - e. HCl

ANSWER: C


POINTS: 0 / 1

-  _____ 57. The correct name for HIO_2 is _____.
- a. hypoiodic acid
 - b. hydriodic acid
 - c. periodous acid
 - d. iodous acid
 - e. periodic acid

ANSWER: D


POINTS: 0 / 1

-  _____ 58.

-  _____ A molecule of water contains hydrogen and oxygen in a 1:8 ratio by mass. This is a statement of _____.
- the law of multiple proportions
 - the law of constant composition
 - the law of conservation of mass
 - the law of conservation of energy
 - none of the above


ANSWER: B

POINTS: 0 / 1

-  _____ 59. Which one of the following is not one of the postulates of Dalton's atomic theory?
- Atoms are composed of protons, neutrons, and electrons.
 - All atoms of a given element are identical; the atoms of different elements are different and have different properties.
 - Atoms of an element are not changed into different types of atoms by chemical reactions: atoms are neither created nor destroyed in chemical reactions.
 - Compounds are formed when atoms of more than one element combine; a given compound always has the same relative number and kind of atoms.
 - Each element is composed of extremely small particles called atoms.


ANSWER: A

POINTS: 0 / 1

-  _____ 60. Which pair of substances could be used to illustrate the law of multiple proportions?
- SO_2 , H_2SO_4
 - CO , CO_2
 - H_2O , O_2
 - CH_4 , $\text{C}_6\text{H}_{12}\text{O}_6$
 - NaCl , KCl


ANSWER: B

POINTS: 0 / 1

-  _____ 61. Of the following, the smallest and lightest subatomic particle is the _____.
- neutron
 - proton
 - electron
 - nucleus
 - alpha particle

ANSWER: C

POINTS: 0 / 1

-  _____ 62. All atoms of a given element have the same _____.
- mass
 - number of protons
 - number of neutrons

- d. number of electrons and neutrons
- e. density

ANSWER: B

POINTS: 0 / 1



63. Which atom has the smallest number of neutrons?
- a. carbon-14
 - b. nitrogen-14
 - c. oxygen-16
 - d. fluorine-19
 - e. neon-20

ANSWER: B

POINTS: 0 / 1




64. Which atom has the largest number of neutrons?
- a. phosphorus-30
 - b. chlorine-37
 - c. potassium-39
 - d. argon-40
 - e. calcium-40

ANSWER: D

POINTS: 0 / 1



65. There are _____ electrons, _____ protons, and _____ neutrons in an atom of .
- a. 132, 132, 54
 - b. 54, 54, 132
 - c. 78, 78, 54
 - d. 54, 54, 78
 - e. 78, 78, 132

ANSWER: D

POINTS: 0 / 1








66. An atom of the most common isotope of gold, ^{197}Au , has _____ protons, _____ neutrons, and _____ electrons.
- a. 197, 79, 118
 - b. 118, 79, 39
 - c. 79, 197, 197
 - d. 79, 118, 118
 - e. 79, 118, 79

ANSWER: E

POINTS: 0 / 1

 67. Which isotope has 45 neutrons?

- a.  1.jj
- b.  2.jj
- c.  3.jj
- d.  4.jj
- e.  5.jpg

ANSWER: B**POINTS: 0 / 1**

 68. In the symbol below, X = _____.



- a. N
- b. C
- c. Al
- d. K
- e. not enough information to determine

ANSWER: B**POINTS: 0 / 1**

 69. In the symbol below, x = _____.



- a. 19
- b. 13
- c. 6
- d. 7
- e. not enough information to determine

ANSWER: E**POINTS: 0 / 1**


 70. An element in the upper right corner of the periodic table _____.

- a. is either a metal or metalloid
- b. is definitely a metal

- c. is either a metalloid or a non-metal
- d. is definitely a non-metal
- e. is definitely a metalloid


ANSWER: D

POINTS: 0 / 1

-  _____ 71. An element that appears in the lower left corner of the periodic table is _____.
- a. either a metal or metalloid
 - b. definitely a metal
 - c. either a metalloid or a non-metal
 - d. definitely a non-metal
 - e. definitely a metalloid


ANSWER: B

POINTS: 0 / 1

-  _____ 72. Which one of the following does not occur as diatomic molecules in elemental form?
- a. oxygen
 - b. nitrogen
 - c. sulfur
 - d. hydrogen
 - e. bromine


ANSWER: C

POINTS: 0 / 1

-  _____ 73. Of the choices below, which one is not an ionic compound?
- a. PCl_5
 - b. MoCl_6
 - c. RbCl
 - d. PbCl_2
 - e. NaCl

ANSWER: A

POINTS: 0 / 1

-  _____ 74. Barium reacts with a polyatomic ion to form a compound with the general formula $\text{Ba}_3(\text{X})_2$. What would be the most likely formula for the compound formed between sodium and the polyatomic ion X?
- a. NaX
 - b. Na_2X
 - c. Na_2X_2
 - d. Na_3X
 - e. Na_3X_2

ANSWER: D

POINTS: 0 / 1

75. How many electrons does the Al^{3+} ion possess?

- a. 16
- b. 10
- c. 6
- d. 0
- e. 13

ANSWER: B**POINTS: 0 / 1****Other**

76. Things you should know...qualitative, quantitative, analyze densities, calculate averages, percent errors, state level of precision and accuracy, draw a graph of data, determine the equation for a line on a graph, extrapolate data, discuss separation techniques

RESPONSE:**ANSWER: ?****POINTS: -- / 0****Retake Test**