

**Test Bank for MindTap General Chemistry 4 terms 24 months Instant
Access 1st Edition Vining Young Day Botch 1305657543
9781305657540**

Full link download:

Test Bank:

<https://testbankpack.com/p/test-bank-for-mindtap-general-chemistry-4-terms-24-months-instant-access-1st-edition-vining-young-day-botch-1305657543-9781305657540/>

1. A certain element consists of two stable isotopes. The first has a mass of 14.0031 amu and a percent natural abundance of 99.63%. The second has a mass of 15.001 amu and a percent natural abundance of 0.37%. What is the atomic mass of the element?

- a. 13.95 amu
- b. 14.00 amu
- c. 14.01 amu
- d. 14.50 amu
- e. 19.50 amu

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

2. The element nitrogen has two stable isotopes, nitrogen-14 with a mass of 14.00 amu and nitrogen-15 with a mass of 15.00 amu. From the atomic mass of nitrogen on the Periodic Table, one can conclude that:

- a. both isotopes have the same percent natural abundance
- b. there is an isotope of nitrogen with an atomic mass of 14.01 amu
- c. nitrogen-14 has the highest percent natural abundance
- d. nitrogen-15 has the highest percent natural abundance

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

Chapter 02 - Elements and Compounds

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 7:29 AM

3. The element indium has two stable isotopes, indium-113 with an atomic mass of 112.9 amu and indium-115 with an atomic mass of 114.9 amu. From the atomic weight found on the periodic table for indium, one can conclude that:

- a. Indium-113 has the highest percent natural abundance
- b. Indium-115 has the highest percent natural abundance
- c. Both isotopes have the same percent natural abundance
- d. There is an isotope of indium with an atomic mass of 114.8 amu

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 3:57 AM

4. What is the identity of the transition element in the fourth Row and Group 6B?

Chapter 02 - Elements and Compounds

- a. Mo
- b. Cr
- c. W
- d. Hf
- e. Zr

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

5. What is the name of the symbol of the element that is in Group 3A and Period 5?

- a. Al
- b. In
- c. Nb
- d. Tl
- e. Y

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 3:59 AM

6. What is the name of the alkali metal that is in Period 5?

- a. iodine
- b. rubidium
- c. strontium
- d. xenon
- e. yttrium

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

Chapter 02 - Elements and Compounds

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:03 AM

7. What is the name of the halogen that is in Period 4?
- a. bromine
 - b. calcium
 - c. iodine

Chapter 02 - Elements and Compounds

d. krypton

e. potassium

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:03 AM

8. What is the name of the halogen in Period 5?

a. Astatine

b. Iodine

c. Strontium

d. Radon

e. Caesium

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/11/2017 11:47 PM

9. The symbol and atomic number of the heaviest alkaline earth metal is:

a. Ra and 226

b. Fr and 223

c. Ra and 88

d. Fr and 87

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

10. What is the identity of the alkaline earth element in the 6th Period?

a. Cs

Chapter 02 - Elements and Compounds

b. Ba

c. Am

d. At

e. Rn

ANSWER: b

POINTS: 1

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

11. What is the identity of the nonmetal in Group 4A?

- a. C
- b. Si
- c. Ge
- d. Sn
- e. Pb

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

12. What is the common name of the group that has a one of its members the element which contains 35 protons in its nucleus?

- a. Alkali metals
- b. Alkaline earth metals
- c. Transition metals
- d. Halogens
- e. Noble gases

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:11 AM

13. The symbol and atomic number of the lightest semi-metal in Group 4A are:

- a. C and 6
- b. Si and 14
- c. Ge and 32

Chapter 02 - Elements and Compounds

d. Sn and 50

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

Chapter 02 - Elements and Compounds

14. How many protons, neutrons and electrons are there in: ${}^6_3\text{Li}$? a. 3p, 3n, 3e⁻
b. 3p, 6n, 3e⁻
c. 6p, 3n, 6e⁻
d. 6p, 3n, 3e⁻
e. 3p, 6n, 6e⁻

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

15. How many protons, neutrons and electrons are there in a neutral atom of the isotope of **silver** named silver- 109?
a. 47p, 109n, 47e⁻
b. 109p, 47n, 109e⁻
c. 62p, 47n, 62e⁻
d. 47p, 62n, 47e⁻
e. 62p, 109n, 62e⁻

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

16. What is the symbol for an ion of an element which has 12 protons and 10 electrons?
a. Mg²⁺
b. Mg²⁻
c. Ne²⁺
d. Ne²⁻
e. Ti²⁺

ANSWER: a

POINTS: 1

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:13 AM

17. How many protons, neutrons, and electrons are in the atom represented by: ${}^{139}_{57}\text{La}^{+}$
- a. 57p, 82n, 57e⁻

Chapter 02 - Elements and Compounds

- b. 57p, 82n, 58e⁻
- c. 57p, 139n, 56e⁻
- d. 57p, 139n, 58e⁻
- e. 57p, 82n, 56e⁻

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:15 AM

18. An ion from a given element has 20 protons, 20 neutrons, and 18 electrons. Which of the following is the correct atomic notation for this ion?

- a. ${}_{20}^{40}\text{Ca}^{2+}$
- b. ${}_{18}^{38}\text{Ar}^{2-}$
- c. ${}_{40}^{58}\text{Zr}^{2+}$
- d. ${}_{20}^{38}\text{Ca}$
- e. ${}_{18}^{38}\text{Ar}^{2+}$

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:17 AM

19. Which of the following pairs have the same number of neutrons?

- a. ${}_{8}^{16}\text{O}$ and ${}_{8}^{17}\text{O}$
- b. ${}_{18}^{40}\text{Ar}$ and ${}_{19}^{41}\text{K}$
- c. ${}_{27}^{60}\text{Co}$ and ${}_{28}^{60}\text{Ni}$
- d. ${}_{1}^3\text{H}$ and ${}_{2}^3\text{He}$
- e. ${}_{36}^{84}\text{Kr}$ and ${}_{37}^{84}\text{Kr}$

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

Chapter 02 - Elements and Compounds

b. 57p, 82n, 58e⁻

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:18 AM

20. How many protons, neutrons, and electrons are in 1 atom of ${}^{69}_{31}\text{Ga}^{2+}$ ion? a. 31p, 31n, 33e⁻

Chapter 02 - Elements and Compounds

b. 33p, 38n, 31e⁻

c. 31p, 38n, 29e⁻

d. 29p, 38n, 31e⁻

e. 31p, 31n, 29e⁻

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:20 AM

21. How many protons and electrons does the most stable ion for calcium have?

protons # electrons

a. 20p 22e⁻

b. 22p 20e⁻

c. 20p 18e⁻

d. 20p 19e⁻

e. 20p 21e⁻

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:22 AM

22. Which of the following is a stable ion of Mg?

a. Mg²⁺

b. Mg⁺

c. Mn²⁺

d. Mn⁺

e. Cannot tell – it has a variable charge

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

Chapter 02 - Elements and Compounds

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:24 AM

23. What is the name of the compound with the chemical formula CaCrO_4 ?
- a. calcium chromide
 - b. calcium chromate
 - c. calcium(I) chromate

Chapter 02 - Elements and Compounds

- d. calcium(II) chromate
- e. calcium chromium oxide

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:30 AM

24. What is the correct systematic name for Na_2SO_3 ?
- a. sodium sulfate
 - b. sodium sulfite
 - c. sodium(III) sulfate
 - d. disodium trisulfide
 - e. disodium monosulfate

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:32 AM

25. What is the name of the compound with the formula CaCl_2 ?
- a. calcium chloride
 - b. calcium(III) chloride
 - c. calcium chlorate
 - d. calcium(II) chlorate
 - e. calcium dichloride

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/18/2017 4:16 AM

26. What is the name of the compound with the formula Cr_2S_3 ?

Chapter 02 - Elements and Compounds

- a. chromium sulfide
- b. chromium(II) sulfide
- c. chromium(III) sulfite
- d. chromium sulfate
- e. dichromium trisulfide

ANSWER: c

Chapter 02 - Elements and Compounds

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/18/2017 4:16 AM

27. What is the formula for the compound which forms between the ammonium ion and bromine?

- a. NH_3Br
- b. NH_4Br
- c. NH_3Br_2
- d. NH_4Br_2
- e. $(\text{NH}_4)_2\text{Br}$

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:42 AM

28. What is the formula for the compound aluminum acetate?

- a. Al_2Ac_3
- b. AlAc_3
- c. $\text{Al}_2(\text{C}_2\text{H}_3\text{O}_2)_3$
- d. $\text{Al}(\text{C}_2\text{H}_3\text{O}_2)_3$
- e. $\text{Al}(\text{C}_2\text{H}_2\text{O}_3)_3$

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

29. What is the correct formula for lead(IV) oxide?

- a. Pb_2O_4
- b. Pb_4O_2

Chapter 02 - Elements and Compounds

c. PbO

d. PbO₂

e. Pb₂O

ANSWER: d

POINTS: 1

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

30. What is the correct formula for ammonium phosphide?

- a. NH_4P
- b. NH_4P_3
- c. $(\text{NH}_4)_3\text{P}$
- d. $(\text{NH}_4)_3\text{P}_2$
- e. $(\text{NH}_4)_2\text{P}_3$

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

31. What is the formula for the compound copper(I) carbonate?

- a. $\text{CuC}_2\text{H}_3\text{O}_2$
- b. $\text{Cu}_2\text{C}_2\text{H}_3\text{O}_2$
- c. CuCO_3
- d. Cu_2CO_3
- e. $\text{Cu}(\text{CO}_3)_2$

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

32. Which of the following pairs is incorrect?

- a. CaCl_2 , calcium chloride
- b. $\text{Fe}(\text{OH})_3$, iron(III) hydroxide
- c. KMnO_4 , potassium permanganate
- d. LiCr_2O_7 , lithium dichromate

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

e. CCl₄, carbon tetrachloride

ANSWER: d

POINTS: 1

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:40 AM

33. What is the name of the compound with the formula AlF_3 ?

- a. aluminum fluoride
- b. fluoroaluminate
- c. cryolite
- d. aluminum(III) trifluoride
- e. monoaluminum trifluoride

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 5:56 AM

34. What is the chemical formula for the compound potassium bromide?

- a. PBr
- b. PBr_3
- c. KBr
- d. KBr_3
- e. PBrO_3

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

35. What is the chemical formula for the compound magnesium phosphate?

- a. Mg_3P_2
- b. MgPO_3
- c. $\text{Mg}_3(\text{PO}_3)_2$
- d. Mg_3PO_4

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

e. $\text{Mg}_3(\text{PO}_4)_2$

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

Chapter 02 - Elements and Compounds

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

36. What is the correct formula for barium hydroxide?

- a. BaOH
- b. Ba(OH)₂
- c. Ba₂OH
- d. Ba₂(OH)₃
- e. Ba₃(OH)₂

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

37. What is the name of the compound with the formula PI₃?

- a. phosphorus tetraiodide
- b. potassium iodide
- c. phosphorus(II) iodide
- d. potassium(III) iodide
- e. phosphorus triiodide

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/27/2017 1:18 AM

38. What is the name of the compound with the chemical formula CF₄?

- a. carbon fluorite
- b. carbon fluorate
- c. carbon(V) fluoride
- d. carbon tetrafluoride
- e. monocarbon tetrafluoride

Chapter 02 - Elements and Compounds

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 6:33 AM

Chapter 02 - Elements and Compounds

39. What is the correct systematic name for ICl_5 ?

- a. iodine chloride
- b. iodine heptachloride
- c. iodine pentachloride
- d. monoiodine heptachloride
- e. monoiodine pentachloride

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:49 AM

40. Give the name of the molecular compound and the name of the aqueous solution for the binary compound HF:

- a. hydrogen fluoride, fluoric acid
- b. hydrogen fluoride, hydrofluoric acid
- c. hydrogen monofluoride, hydrofluoric acid
- d. hydrogen monofluoride, fluoric acid
- e. hydrogen monofluoride, fluorous acid

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:50 AM

41. All of the following are in aqueous solution. Which is incorrectly named?

- a. H_3PO_4 , phosphoric acid
- b. HCN, cyanic acid
- c. H_2SO_3 , sulfurous acid
- d. HMnO_4 , permanganic acid
- e. HNO_2 , nitrous acid

ANSWER: b

POINTS: 1

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

42. What is the name for the compound with the formula HF?
- a. fluoric acid

Chapter 02 - Elements and Compounds

- b. fluorous acid
- c. hydrofluoric acid
- d. hydrofluorous acid
- e. hydrogen monofluoride

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:51 AM

43. What is the name of the compound with the formula HNO_2 ?

- a. nitric acid
- b. nitrous acid
- c. hydronitric acid
- d. hydronitrous acid
- e. hydrogen mononitrogen dioxide

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 4:54 AM

44. What is the chemical formula for nitric acid?

- a. HNO_2
- b. HNO_3
- c. HNO_4
- d. H_2NO_3
- e. H_2NO_2

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

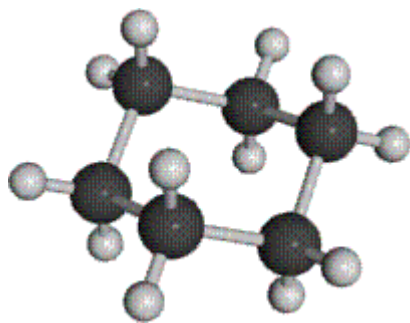
DATE CREATED: 3/5/2014 6:49 PM

Chapter 02 - Elements and Compounds

DATE MODIFIED: 3/5/2014 6:49 PM

45. What are the empirical and molecular formulas for the following compound? (C = dark atoms, H = light atoms)

Chapter 02 - Elements and Compounds



Molecular Empirical

- a. C₆H₆ CH
- b. C₆H₁₂ CH₂
- c. CH C₆H₆
- d. CH₂ C₆H₁₂

ANSWER: b

POINTS: 1

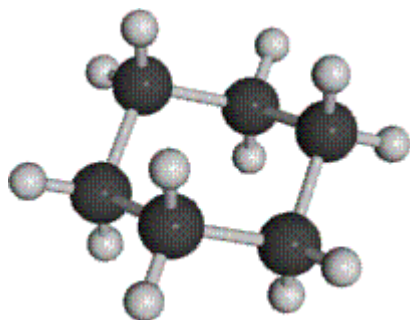
QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/19/2016 3:33 AM

46. What type of compound is depicted below?



- a. Binary acid
- b. Binary ionic
- c. Covalent - molecular
- d. Covalent - network

Chapter 02 - Elements and Compounds

e. Ternary ionic

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

Chapter 02 - Elements and Compounds

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

47. The nucleus of a ^{191}Ir nuclide contains
- 191 neutrons and 268 electrons.
 - 77 protons and 191 neutrons.
 - 191 protons and 114 electrons.
 - 191 protons, 77 neutrons, and 191 electrons.
 - 77 protons and 114 neutrons.

ANSWER: e

POINTS: 1

REFERENCES: 2.1.1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:44 AM

48. Which combination of protons, neutrons, and electrons correctly represents a neutral ^{57}Fe atom?
- 26 protons, 31 neutrons, 57 electrons
 - 26 protons, 31 neutrons, 31 electrons
 - 26 protons, 31 neutrons, 26 electrons
 - 57 protons, 26 neutrons, 57 electrons
 - 57 protons, 26 neutrons, 26 electrons

ANSWER: c

POINTS: 1

REFERENCES: 2.1.1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:44 AM

49. Naturally occurring element X exists in three isotopic forms: X-28 (27.975 amu, 92.21% abundance), X-29 (28.976 amu, 4.70% abundance), and X-30 (29.974 amu, 3.09% abundance). Calculate the atomic weight of X.

Chapter 02 - Elements and Compounds

- a. 29.08 amu
- b. 28.08 amu
- c. 35.29 amu
- d. 86.93 amu
- e. 25.80 amu

ANSWER: b

POINTS: 1

REFERENCES: 2.1.2

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 4:41 AM

50. The chemical name for the binary, non-ionic molecule with the formula NF_3 is
- nitrogen trifluoride.
 - mononitrogen fluoride.
 - nitride trifluoride.
 - nitrogen trifluorine.
 - mononitrogen trifluorine.

ANSWER: a

POINTS: 1

REFERENCES: 2.3.2

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:49 AM

51. The formula for chloric acid is
- HClO_2
 - HClO
 - HCl
 - HClO_4
 - HClO_3

ANSWER: e

POINTS: 1

REFERENCES: 2.3.2

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/11/2017 6:23 AM

52. As an ion, sodium has ___ electrons.
- 22
 - 14
 - 11

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 4:41 AM

d. 27

e. 10

ANSWER: e

POINTS: 1

REFERENCES: 2.4.1

Chapter 02 - Elements and Compounds

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:51 AM

53. What is the correct formula for an ionic compound that contains magnesium ions and phosphide ions?

- a. MgP
- b. MgP₂
- c. Mg₃P₂
- d. Mg₃(PO₄)₂
- e. Mg₂P₃

ANSWER: c

POINTS: 1

REFERENCES: 2.4.2

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:52 AM

54. The formula for aluminum bromide is

- a. AlB.
- b. AlBr.
- c. Al₂Br₃.
- d. AlBr₂.
- e. AlBr₃.

ANSWER: e

POINTS: 1

REFERENCES: 2.4.2

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:53 AM

55. The formula for copper(II) phosphate is

- a. Co₃(PO₄)₂.

b. CuPO_4 .

c. $\text{Co}_2(\text{PO}_4)_3$.

d. $\text{Cu}_2(\text{PO}_4)_3$.

e. $\text{Cu}_3(\text{PO}_4)_2$.

ANSWER: e

POINTS: 1

REFERENCES: 2.4.3

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:55 AM

56. Which of the following statements is true about the compound BaCl₂?

- a. It is composed of one Ba atom and one Cl₂ molecule.
- b. It is composed of half Ba atom and three Cl atoms.
- c. It is composed of one Ba²⁺ ion and one Cl²⁻ ion.
- d. It is composed of one BaCl₂ molecule.
- e. It is composed of one Ba²⁺ ion and two Cl⁻ ions.

ANSWER: e

POINTS: 1

REFERENCES: 2.4.4

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/18/2017 5:05 AM

57. The name of the SO₄²⁻ ion is

- a. persulfate.
- b. thiosulfite.
- c. sulfite.
- d. sulfate.
- e. sulfide.

ANSWER: d

POINTS: 1

REFERENCES: 2.4.3

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 2:29 AM

58. Which group of three elements contains a nonmetal, a metal, and a metalloid?

- a. H, Zn, I
- b. Zn, I, Br
- c. Zn, Cu, Si
- d. Cu, Zn, I e. I, Zn,
Si

ANSWER:
e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 6:59 AM

59. Which pair of elements would you expect to exhibit the greatest similarity in their physical and chemical properties?

- a. K and Ca
- b. Ga and Ge
- c. Cl and Br
- d. Cs and Ba
- e. Be and Li

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 7:00 AM

60. The correct name for the compound P_2O_3 is

- a. phosphorus oxide.
- b. diphosphorus trioxide.
- c. diphosphorus oxide.
- d. diphosphide trioxide.
- e. phosphide trioxide.

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/18/2017 5:10 AM

61. The formula for bromic acid is?

- a. $HBrO_4$
- b. $HBrO_2$

- c. HBrO
- d. HBr
- e. HBrO₃

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 7:04 AM

62. What is the correct formula for copper(II) nitride?

- a. Cu₃N
- b. CuN
- c. Cu₃N₂
- d. CuN₂
- e. Cu₂N₃

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 7:09 AM

63. Which of the following gives the correct numbers of protons, neutrons, and electrons in a neutral atom of ¹¹⁰Ag?

- ?
a. 47 protons, 63 neutrons, 47 electrons
- b. 110 protons, 47 neutrons, 110 electrons
- c. 110 protons, 110 neutrons, 47 electrons
- d. 63 protons, 63 neutrons, 47 electrons
- e. 47 protons, 47 neutrons, 47 electrons

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/20/2017 6:31 AM

64. An element has three naturally occurring isotopes with the following abundances and masses:

<u>abundance</u>	<u>mass (amu)</u>
77.66%	35.23
8.12%	36.17

15.96%

37.03

Determine the atomic mass of the element.

- a. 35.38 amu
- b. 109.7 amu
- c. 36.17 amu
- d. 3538 amu

e. none of the above

ANSWER: a

POINTS: 1

REFERENCES: 2.1.2

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

65. Which species below is the nitrite ion?

a. N_3^-

b. NO_2^-

c. NH_4^+

d. NO_3^-

e. N_3^-

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 12/12/2016 7:15 AM

66. What is the correct formula for copper(II) nitride?

a. CuN_2

b. Cu_3N

c. CuN

d. Cu_2N_3

e. Cu_3N_2

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: True

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

Chapter 02 - Elements and Compounds

67. The main difference between a proton and a neutron is:
- a. a proton has considerably more mass than a neutron.
 - b. a proton is charged, a neutron is not.
 - c. a neutron is much larger than a proton.
 - d. a neutron is located in the nucleus of an atom, a proton is not.
 - e. a proton is much larger than a neutron.

Chapter 02 - Elements and Compounds

ANSWER: b

POINTS: 1

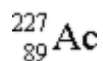
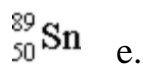
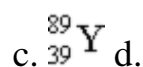
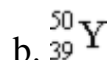
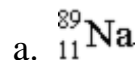
QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

68. What is the atomic symbol for an element with 39 protons and 50 neutrons?



ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

69. What is the identity of ${}_{28}^{58}\text{X}$?

a. Ni

b. Zn

c. Rn

d. Ce

e. Pd

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 1/12/2017 7:36 AM

Chapter 02 - Elements and Compounds

70. A specially prepared sample of nitrogen contains 30% ^{14}N (mass = 14.00 u) and 70% ^{15}N (mass = 15.00 u). What is the atomic mass of the nitrogen in this sample?

- a. 14.00
- b. 14.30
- c. 14.50

Chapter 02 - Elements and Compounds

d. 14.70

e. 15.00

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

71. Which element listed below is not classified as a lanthanide or actinide?

a. Ce

b. Sm

c. U

d. Fr

e. all are lanthanides or actinides

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

72. In which group of the following groups of the periodic table are all the elements nonmetals?

a. 2A

b. 3A

c. 5A

d. 6A

e. 7A

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

73. Which of the following sets of elements would be expected to have very similar chemical

properties for all elements?

- Br, Cl, Co, Cu, F, Fe, Ni, S, Zn
- a. F, Cl, S, Br
 - b. F, Cl, Br
 - c. Fe, Co, Ni, Cu, Zn
 - d. Fe, Ni, Zn

e. Co, Cu, Zn

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

74. C₂H₂F₄ is the formula for two possible molecules. C₂H₂F₄ is an example of a(n)

- a. structural formula.
- b. empirical formula.
- c. condensed formula.
- d. space-filling model.
- e. molecular formula.

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

75. What is the correct name for the compound with a formula of P₂O₅?

- a. Phosphorous(II) oxide
- b. Phosphorous(V) oxide
- c. Diphosphorous Pentoxide
- d. Phosphate
- e. Phosphorous oxide

ANSWER: c

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

76. The systematic name of the compound H₂SO₃ is

- a. sulfurous acid

- b. sulfuric acid
- c. hydrosulfuric acid
- d. dihydrogen sulfite
- e. none of these

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

77. Which element is most likely to form a 2- ion?

- a. K
- b. Mg
- c. P
- d. Br
- e. S

ANSWER: e

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

78. The species written as S^{2-} has:

- a. 16 protons and 18 electrons.
- b. 18 protons and 16 electrons.
- c. 16 protons and 14 electrons.
- d. 18 protons and 20 electrons.
- e. none of these.

ANSWER: a

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

79. The correct formula of an ionic compound made up of K and O is:

- a. KO
- b. K₂O
- c. K₂O₃

d. K3O

e. none of these

ANSWER: b

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM

80. What is the systematic name of the ionic compound with the formula $\text{Cu}(\text{NO}_3)_2$?

- a. Copper nitrite
- b. Copper(I) nitrate
- c. Copper nitride
- d. Copper(II) nitrate
- e. Copper(I) nitrite

ANSWER: d

POINTS: 1

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 3/5/2014 6:49 PM

DATE MODIFIED: 3/5/2014 6:49 PM