

Chapter 9 Practice Test

Multiple Choice

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

****You need to know all the rules for naming ionic, molecular and acidic compounds. ****You will have questions over ch 1,2,4 and 25 as well.

The majority of your test is naming though.

***You need to be able to classify compounds as ionic, acidic and molecular.

**** If your grade is close to a D you can not afford to not pass this test.

****Help is available during tutorials and brunch and at intervention.

- _____ 1. What type of ions have names ending in *-ide*?
- only cations
 - only anions
 - only metal ions
 - only gaseous ions
- _____ 2. What is the correct name for the N^{3-} ion?
- nitrate ion
 - nitrogen ion
 - nitride ion
 - nitrite ion
- _____ 3. When naming a transition metal ion that can have more than one common ionic charge, the numerical value of the charge is indicated by a _____.
- prefix
 - suffix
 - Roman numeral following the name
 - superscript after the name
- _____ 4. Aluminum is a group 3A metal. Which ion does Al typically form?
- Al^{3-}
 - Al^{3+}
 - Al^{5-}
 - Al^{5+}
- _____ 5. An *-ate* or *-ite* at the end of a compound name usually indicates that the compound contains _____.
- fewer electrons than protons
 - neutral molecules
 - only two elements
 - a polyatomic anion
- _____ 6. Which of the following compounds contains the Mn^{3+} ion?
- MnS
 - MnBr_2
 - Mn_2O_3
 - MnO
- _____ 7. Which of the following formulas represents an ionic compound?
- CS_2
 - BaI_2
 - N_2O_4
 - PCl_3
- _____ 8. Which element, when combined with fluorine, would most likely form an ionic compound?
- lithium
 - carbon
 - phosphorus
 - chlorine
- _____ 9. In which of the following are the formula of the ionic compound and the charge on the metal ion shown correctly?
- UCl_5, U^+
 - $\text{ThO}_2, \text{Th}^{4+}$
 - $\text{IrS}_2, \text{Ir}^{2+}$
 - NiO, Ni^+

- _____ 10. In which of the following is the name and formula given correctly?
- sodium oxide, NaO
 - barium nitride, BaN
 - cobaltous chloride, CoCl_3
 - stannic fluoride, SnF_4
- _____ 11. Which of the following compounds contains the lead(II) ion?
- PbO
 - PbCl_4
 - Pb_2O
 - Pb_2S
- _____ 12. Which set of chemical name and chemical formula for the same compound is correct?
- iron(II) oxide, Fe_2O_3
 - aluminum fluorate, AlF_3
 - tin(IV) bromide, SnBr_4
 - potassium chloride, K_2Cl_2
- _____ 13. What is the correct formula for potassium sulfite?
- KHSO_3
 - KHSO_4
 - K_2SO_3
 - K_2SO_4
- _____ 14. Which set of chemical name and chemical formula for the same compound is correct?
- ammonium sulfite, $(\text{NH}_4)_2\text{S}$
 - iron(III) phosphate, FePO_4
 - lithium carbonate, LiCO_3
 - magnesium dichromate, MgCrO_4
- _____ 15. Molecular compounds are usually ____.
- composed of two or more transition elements
 - composed of positive and negative ions
 - composed of two or more nonmetallic elements
 - exceptions to the law of definite proportions
- _____ 16. Which of the following formulas represents a molecular compound?
- ZnO
 - Xe
 - SO_2
 - BeF_2
- _____ 17. Which of the following shows both the correct formula and correct name of an acid?
- HClO_2 , chloric acid
 - HNO_2 , hydronitrous acid
 - H_3PO_4 , phosphoric acid
 - HI, iodic acid
- _____ 18. What is the name of H_2SO_3 ?
- hyposulfuric acid
 - hydrosulfuric acid
 - sulfuric acid
 - sulfurous acid
- _____ 19. When the name of an anion that is part of an acid ends in *-ite*, the acid name includes the suffix ____.
- ous*
 - ic*
 - ate*
 - ite*
- _____ 20. What is the formula for sulfurous acid?
- H_2SO_4
 - H_2SO_3
 - H_2SO_2
 - H_2S
- _____ 21. What is the formula for phosphoric acid?
- H_2PO_3
 - H_3PO_4
 - HPO_2
 - HPO_4
- _____ 22. What is the formula for hydrosulfuric acid?
- H_2S_2
 - H_2SO_2
 - HSO_2
 - H_2S

Name: _____

ID: A

- _____ 23. Select the correct formula for sulfur hexafluoride.
- | | |
|--------------|-------------|
| a. S_2F_6 | c. F_6S_2 |
| b. F_6SO_3 | d. SF_6 |
- _____ 24. What is the correct name for the compound $CoCl_2$?
- | | |
|-----------------------|------------------------|
| a. cobalt(I) chlorate | c. cobalt(II) chlorate |
| b. cobalt(I) chloride | d. cobalt(II) chloride |
- _____ 25. What is the correct formula for barium chlorate?
- | | |
|------------------|------------------|
| a. $Ba(ClO)_2$ | c. $Ba(ClO_3)_2$ |
| b. $Ba(ClO_2)_2$ | d. $BaCl_2$ |
- _____ 26. What is the correct formula for calcium dihydrogen phosphate?
- | | |
|------------------|---------------------|
| a. CaH_2PO_4 | c. $Ca(H_2PO_4)_2$ |
| b. $Ca_2H_2PO_4$ | d. $Ca(H_2HPO_4)_2$ |
- _____ 27. Which of the following is the correct name for N_2O_5 ?
- | | |
|-------------------------|---------------------|
| a. nitrous oxide | c. nitrogen dioxide |
| b. dinitrogen pentoxide | d. nitrate oxide |
- _____ 28. What is the correct name for $Sn_3(PO_4)_2$?
- | | |
|-----------------------|-----------------------|
| a. tritin diphosphate | c. tin(III) phosphate |
| b. tin(II) phosphate | d. tin(IV) phosphate |

Short Answer

29. What is the formula for Iron (III) Hypochlorite?
30. What is the formula for Nickel Nitrate?
31. What is the name of $CrCO_3$?
32. What is the name of the following compound? $CaCrO_4$
33. What is the name of KCN?

Numeric Response

34. How many iron(II) ions combine with oxygen to form iron(II) oxide?

Chapter 9 Practice Test Answer Section

MULTIPLE CHOICE

- | | | | | |
|-----|------------------------------|-----------------------|---------|-------------------------------|
| 1. | ANS: B
OBJ: 9.1.1 | PTS: 1 | DIF: L1 | REF: p. 254 |
| 2. | ANS: C
OBJ: 9.1.1 | PTS: 1
STA: Ch.3 | DIF: L1 | REF: p. 254 |
| 3. | ANS: C
OBJ: 9.1.1 | PTS: 1 | DIF: L1 | REF: p. 254 p. 255 |
| 4. | ANS: B
OBJ: 9.1.1 | PTS: 1 | DIF: L1 | REF: p. 253 |
| 5. | ANS: D
OBJ: 9.1.2 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 257 |
| 6. | ANS: C
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L1 | REF: p. 262 p. 263 |
| 7. | ANS: B
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 262 |
| 8. | ANS: A
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 253 p. 254 p. 262 |
| 9. | ANS: B
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 262 |
| 10. | ANS: D
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 262 p. 263 |
| 11. | ANS: A
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 262 p. 263 |
| 12. | ANS: C
OBJ: 9.2.1 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 261 p. 262 |
| 13. | ANS: C
OBJ: 9.2.2 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 257 p. 261 p. 262 |
| 14. | ANS: B
OBJ: 9.1.3 9.2.2 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 264 p. 265 p. 266 |
| 15. | ANS: C
OBJ: 9.3.1 9.3.2 | PTS: 1
STA: Ch.2.a | DIF: L1 | REF: p. 268 |
| 16. | ANS: C
OBJ: 9.3.2 | PTS: 1
STA: Ch.2 | DIF: L2 | REF: p. 269 |
| 17. | ANS: C
OBJ: 9.4.1 | PTS: 1
STA: Ch.5 | DIF: L2 | REF: p. 272 |
| 18. | ANS: D
OBJ: 9.4.1 | PTS: 1
STA: Ch.5 | DIF: L2 | REF: p. 272 |
| 19. | ANS: A
OBJ: 9.4.1 | PTS: 1
STA: Ch.5.a | DIF: L2 | REF: p. 272 |
| 20. | ANS: B
OBJ: 9.4.2 | PTS: 1
STA: Ch.5 | DIF: L2 | REF: p. 272 |
| 21. | ANS: B
OBJ: 9.4.2 | PTS: 1
STA: Ch.5 | DIF: L2 | REF: p. 272 |

22. ANS: D PTS: 1 DIF: L3 REF: p. 272
OBJ: 9.4.2 STA: Ch.5
23. ANS: D PTS: 1 DIF: L2 REF: p. 270 | p. 278
OBJ: 9.3.2 | 9.5.2 STA: Ch.5
24. ANS: D PTS: 1 DIF: L2 REF: p. 261 | p. 262 | p. 277
OBJ: 9.2.1 | 9.5.2 STA: Ch.5
25. ANS: C PTS: 1 DIF: L3 REF: p. 257 | p. 264
OBJ: 9.2.2 | 9.2.3 | 9.5.2 STA: Ch.5
26. ANS: C PTS: 1 DIF: L3 REF: p. 257 | p. 264
OBJ: 9.2.2 | 9.2.3 | 9.5.2 STA: Ch.5
27. ANS: B PTS: 1 DIF: L2 REF: p. 269 | p. 277
OBJ: 9.3.2 | 9.5.3 STA: Ch.2.b | Ch.5
28. ANS: B PTS: 1 DIF: L3 REF: p. 264 | p. 277
OBJ: 9.5.3 STA: Ch.2.b | Ch.5

SHORT ANSWER

29. ANS:
Fe(ClO)₃
- PTS: 1
30. ANS:
Ni(NO₃)₂
- PTS: 1
31. ANS:
Chromium (II) Carbonate
- PTS: 1
32. ANS:
Calcium Chromate
- PTS: 1
33. ANS:
Potassium Cyanide
- PTS: 1

NUMERIC RESPONSE

34. ANS: 1
- PTS: 1 DIF: L2 REF: p. 257 | p. 261 | p. 264
OBJ: 9.1.1 | 9.2.1 STA: Ch.2