

Deep Run High School

CHEMISTRY I: 1(A), 5(A), 7(A)

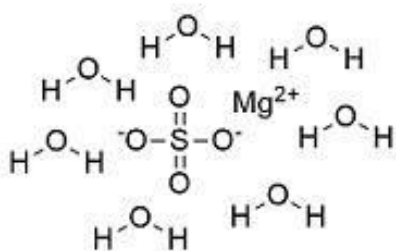
## Unit 5 Chemical Bonding Test

Instructor: Jennifer Krug

Score: / 100

This test covers Ionic Bonding, Covalent Bonding, nomenclature, and writing formulas. You will have 45 minutes to complete this test.

11

$$\text{MgSO}_4 \cdot 7 \text{H}_2\text{O}?$$


Magnesium sulfate heptahydrate

11

7

28

4

Name: \_\_\_\_\_

Question 2

/1

**How many atoms are in the formula for ammonium chloride?**

☐

8

☐

4

☐

6

☐

2

Question 3

/1

**Choose the correct formula for: lead IV phosphate**

☐

$\text{Pb}(\text{PO}_4)_4$

☐

$\text{Pb}_2(\text{PO}_3)_4$

☐

$\text{Pb}_3(\text{PO}_4)_4$

☐

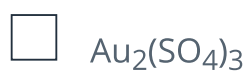
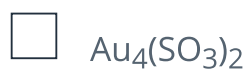
$\text{Pb}_4(\text{PO}_4)_3$

Name: \_\_\_\_\_

Question 4

/1

Choose the correct formula for: gold III sulfate



Question 5

/1

Choose the correct formula for: barium sulfide



Name: \_\_\_\_\_

Question 6

/1

Choose the correct formula for: magnesium nitride

☐

$\text{Mg}_3\text{N}_2$

☐

$\text{Mg}_2\text{N}_3$

☐

$\text{Mg}_3\text{N}$

☐

$\text{MgN}_2$

Question 7

/1

Choose the correct formula for: nickel I phosphide

☐

$\text{NiPO}_4$

☐

$\text{Ni}_3\text{P}$

☐

$\text{Ni}_3\text{PO}_4$

☐

$\text{NiP}$

Name: \_\_\_\_\_

Question 8

/1

**Choose the correct formula for: cobalt II fluoride**

☐

CoF

☐

CuF<sub>2</sub>

☐

Co<sub>2</sub>Fl

☐

CoF<sub>2</sub>

Question 9

/1

**Choose the correct name for: Ba<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>**

☐

barium phosphate

☐

barium II phosphide

☐

barium II phosphate

☐

barium phosphide

Name: \_\_\_\_\_

Question 10

/1

Choose the correct name for:  $\text{BaSO}_4$

- ☐ barium sulfade
- ☐ barium sulfur oxide
- ☐ barium sulfoxide
- ☐ barium sulfate

Question 11

/1

Choose the correct name for:  $\text{Ag}_2\text{S}$

- ☐ argon II sulfide
- ☐ silver II sulfide
- ☐ argon sulfide
- ☐ silver sulfide

Name: \_\_\_\_\_

Question 12

/1

**Choose the correct name for:  $\text{MgO}$**

- ☐ magnesium oxate
- ☐ magnesium I oxide
- ☐ magnesium oxide
- ☐ magnesium II oxide

Question 13

/1

**Choose the correct name for:  $\text{PCl}_5$**

- ☐ phosphorus V chloride
- ☐ phosphorus tetrachloride
- ☐ phosphorus pentachloride
- ☐ phosphorus chloride



Name: \_\_\_\_\_

Question 14

/1

**Choose the correct name for: CO**

- ☐ carbon monoxide
- ☐ carbonate
- ☐ carbon oxygen
- ☐ cobalt

Question 15

/1

**Choose the correct name for:  $\text{Cu}_3(\text{PO}_4)_2$**

- ☐ copper III phosphide
- ☐ copper III phosphate
- ☐ copper II phosphide
- ☐ copper II phosphate

Name: \_\_\_\_\_

Question 16

/1

Choose the correct name for:  $\text{Sn}_3(\text{PO}_4)_4$

- ☐ tin I phosphate
- ☐ tin III phosphate
- ☐ tin IV phosphate
- ☐ tin II phosphate

Question 17

/1

All of the following are characteristics of covalent molecules EXCEPT

- ☐ good heat insulator
- ☐ weaker intermolecular forces
- ☐ conducts electricity
- ☐ gases at room temperature

Name: \_\_\_\_\_

Question 18

/1

Covalent bonding uses \_\_\_\_\_ to indicate the number of atoms present in the molecule.

☐

suffixes

☐

Roman numerals

☐

superscripts

☐

Greek prefixes

Question 19

/1

How many valence electrons does an atom of carbon contain?

☐

12

☐

4

☐

6

☐

2

Name: \_\_\_\_\_

Question 20

/1

**Metal ions have \_\_\_\_\_ oxidation numbers.**

- ☐ neutral
- ☐ negative
- ☐ postive

Question 21

/1

**What rule determines the maximum number of valence electrons allowed in the outer orbital?**

- ☐ VSEPR Rule
- ☐ Hund's rule
- ☐ Octet rule
- ☐ Orbital rule

Name: \_\_\_\_\_

Question 22

/1

**Bromine has \_\_\_ valence electrons.**

☐

4

☐

7

☐

17

☐

35

Question 23

/1

**Choose the correct formula for: zinc hydroxide**

☐

$\text{Zn}_2\text{OH}$

☐

$\text{ZnOH}_2$

☐

$\text{Zn}(\text{OH})_2$

☐

$\text{ZnOH}$

Name: \_\_\_\_\_

Question 24

/1

Choose the correct formula for: strontium nitrate

☐  $\text{Sr}(\text{NO}_3)_2$

☐  $\text{SrNO}_3$

☐  $\text{Sr}_2(\text{NO}_3)$

☐  $\text{SrN}_3$

Question 25

/1

Choose the correct formula for hydrogen gas.

☐  $\text{H}_2$

☐  $\text{H}^{-1}$

☐  $\text{H}$

☐  $\text{H}^{+1}$

Name: \_\_\_\_\_

Question 26

/1

Choose the correct formula for: dinitrogen tetrachloride

☐ 4 N<sub>2</sub>Cl

☐ N<sub>2</sub>Cl<sub>4</sub>

☐ N<sub>2</sub>C<sub>4</sub>

☐ 2 NCl<sub>4</sub>

Question 27

/1

In order for ionic bonding to occur,

☐ metals must lose protons and nonmetals must lose electrons

☐ metals must gain electrons and nonmetals must lose protons

☐ metals must gain protons and nonmetals must gain electrons

☐ metals must lose electrons and nonmetals must gain electrons

Name: \_\_\_\_\_

Question 28

/1

When naming a transition metal that has more than one oxidation number (charge), the numeric value of the oxidation number (charge) is indicated by a —

- ☐ subscript
- ☐ Roman numeral
- ☐ suffix
- ☐ Greek prefix

Question 29

/1

Choose the correct name for:  $\text{Cu}_3\text{P}$

- ☐ copper III phosphide
- ☐ copper I phosphide
- ☐ copper I phosphate
- ☐ copper phosphide



Name: \_\_\_\_\_

Question 30

/1

Choose the correct name for:  $\text{Fe}_2\text{O}_3$

☐ iron hydroxide

☐ iron II oxide

☐ iron III oxide

☐ iron oxide