

Deep Run High School

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

Unit 5 Chemical Bonding Test

Instructor: Jennifer Krug

Name: _____

Score: _____ / 100

Instructions:

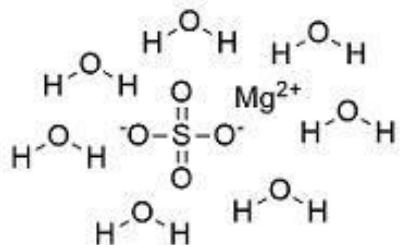
This test covers Ionic Bonding, Covalent Bonding, nomenclature, and writing formulas. You will have 45 minutes to complete this test.

Question 1

/1

How many oxygen atoms are represented in the formula for epsom salt -

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



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

- Mg₃N₂
- Mg₂N₃
- Mg₃N
- MgN₂

Question 7

 /1

Choose the correct formula for: nickel I phosphide

- NiPO₄
- Ni₃P
- Ni₃PO₄
- NiP

Name: _____

Question 8

/1

Choose the correct formula for: cobalt II fluoride

- CoF
- CuF₂
- Co₂Fl
- CoF₂

Question 9

/1

Choose the correct name for: Ba₃(PO₄)₂

- barium phosphate
- barium II phosphide
- barium II phosphate
- barium phosphide

Name: _____

Question 10

/1

Choose the correct name for: BaSO_4

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

Question 11

/1

Choose the correct name for: Ag_2S

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

Name: _____

Question 12

/1

Choose the correct name for: MgO

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

Question 13

/1

Choose the correct name for: PCl₅

- 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: Cu₃(PO₄)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
- positive

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

Zn_2OH

ZnOH_2

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

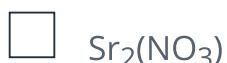
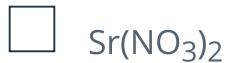
ZnOH

Name: _____

Question 24

/1

Choose the correct formula for: strontium nitrate



Question 25

/1

Choose the correct formula for hydrogen gas.



Name: _____

Question 26

/1

Choose the correct formula for: dinitrogen tetrachloride

- $4 \text{N}_2\text{Cl}$
- N_2Cl_4
- N_2C_4
- 2NCl_4

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: Cu_3P

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

Name: _____

Question 30

 /1

Choose the correct name for: Fe_2O_3

- iron hydoxide
- iron II oxide
- iron III oxide
- iron oxide