

HW04

Question 1

1 pts

How many total electrons are in the oxide anion?

- 12
- 6
- 10
- 4
- 8

Question 2

1 pts

The metal Ca and the nonmetal Br form an ionic bond. What is the formula for this ionic compound?

- Ca₃Br₂
- Ca₂Br₃
- Ca₂Br
- CaBr₂
- CaBr

Question 3

1 pts

Strontium (Sr) and chlorine (Cl) come together to make a bond. What type of compound is formed and what is its formula?

- Ionic, SrCl
- Covalent, SrCl₂
- Ionic, SrCl₂
- Covalent, Sr₂Cl₂

Question 4

1 pts

An example of iron oxidizing to form rust involves oxide forming an ionic compound with iron(III). What is the formula of this ionic compound?

- FeO₃
- Fe₂O₄
- FeO
- Fe₂O₃
- Fe₃O₂

Question 5

1 pts

Cobalt(II) forms an ionic compound with hydroxide. What is the formula for this compound?

- OH₂Co
- Co(OH)₃
- CoOH₂
- Co(OH)₂
- CoOH

Question 6

1 pts

What is the formula for magnesium phosphate?

- Mg₃(PO₃)₂
- Mg(PO₄)₂
- MgPO₄
- Mg₃(PO₄)₂
- Mg₃PO₄

Question 7

1 pts

What is the formula for sodium phosphite?

- NaPO₃
- Na₃PO₄
- Na₂PO₃
- Na(PO₃)₃
- Na₃PO₃

Question 8

1 pts

What is the name of Na₂S?

- sodium sulfide
- sodious sulfous
- sodium sulfite
- sodium sulfate
- disodium sulfurous
- disodium sulfide

Question 9

1 pts

Compared to a nonmetal in the same period, a metal is more likely to _____ its valence shell and form a _____.

- fill, cation
- fill, anion
- empty, anion
- empty, cation

Question 10

1 pts

Select the ionic compound with the strongest theoretical ionic bond strength.

- NaF
- NaI
- KF
- KCl

Question 11

1 pts

Select the ionic compound with the highest theoretical lattice energy.

- MgCl₂
- CaI₂
- CaBr₂
- MgI₂

Question 12

1 pts

A stronger ionic bond is typically associated with the ions having...

select all that apply

- larger charges
- greater charge density
- larger ionic radii
- smaller ionic radii

Question 13

1 pts

The range of atomic radii for small to large atoms is approximately...

- 40 to 5000 Å
- 50 to 300 Å
- .5 to 3 Å
- 1 to 1000 Å
- .5 to 300 Å

Question 14

1 pts

Which of the following best ranks the neutral elements P, Ge, and O from smallest to largest atomic radius?

- O < P < Ge
- Ge < O < P
- P < O < Ge
- O < Ge < P
- Ge < P < O

Question 15

1 pts

The smallest atomic radius in a particular period will be the...

- alkaline earth metal
- alkali metal
- halogen
- noble gas

Question 16

1 pts

Which of the following species is most likely to lose an electron to form a cation?

- Oxygen
- Carbon
- Fluorine
- Sodium

Question 17

1 pts

Which of the following is expected to have the highest electronegativity?

- Carbon
- Magnesium
- Chlorine
- Sodium

Question 18

1 pts

Hydrofluoric acid, HF, makes a polar covalent bond. Which of the following best describes the bond?

There is an unequal sharing of electrons, resulting in completely neutral charges on each atom

There is an equal sharing of electrons, resulting in a partial negative and partial positive

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There is an unequal sharing of electrons, resulting in a partial negative and partial positive

Question 19

1 pts

A bond between two nonmetals involves the sharing of electrons. However, one of the atoms has a higher electron affinity, meaning it attracts the electrons in the bond more than the other atom. What type of bond is this?

Metallic

Pure Covalent

Polar covalent

Ionic

Question 20

1 pts

Select all the covalent compounds below:

- HCl
- CH₄
- NH₃
- LiBr
- H₂O
- Br₂
- CaO
- CO₂

Question 21

1 pts

Select all the compounds below that have ionic bonds.

- MgCl₂
- LiBr
- CH₃OH
- FeCl₃
- NaCl
- H₂O
- HBr

Question 22

1 pts

Which type of bond is found in each of the following compounds?

HBr

I₂

LiBr

- HBr: ionic
I₂: covalent
LiBr: covalent
- HBr: ionic
I₂: covalent
LiBr: ionic
- HBr: covalent
I₂: ionic
LiBr: covalent
- HBr: covalent
I₂: covalent
LiBr: ionic

Question 23

1 pts

What are the bonds in the following molecules?

HCl

Br₂

KCl

- HCl: covalent
Br₂: covalent
KCl: ionic
- HCl: ionic
Br₂: ionic
KCl: covalent
- HCl: ionic
Br₂: covalent
KCl: covalent
- HCl: ionic
Br₂: covalent
KCl: ionic