

HW06a - Periodic Trends and Intro to Bonding

 This is a preview of the published version of the quiz

Started: Oct 3 at 5:23pm

Quiz Instructions

Homework 06a - Periodic Trends and Intro to Bonding

(plus a little nomenclature)

Question 1

1 pts

Let X be a hypothetical element. Which of the following would be the largest?

X

X^{2-}

X^{2+}

X^+

X^-

Question 2

1 pts

If the following crystallize in the same type of structure, which has the lowest lattice energy?

SrO

BaS

SrS

CaO

BaO

Question 3

1 pts

Which pair of elements is most likely to form an ionic compound?

- nitrogen and sulfur
- sodium and aluminum
- magnesium and fluorine
- oxygen and chlorine

Question 4

1 pts

Covalent compounds are generally made up of elements found in which part of the periodic table?

- left and right
- lower left
- upper left
- upper right

Question 5

1 pts

Which is the correct order of increasing bond strength?

- triple, double, single
- double, single, triple
- single, double triple
- double, triple, single

Question 6

1 pts

Which do you predict to have the strongest C–N bond?

- HCN
- NHCH₂
- All are equal.
- NH₂CH₃

Question 7

1 pts

Which of the following contains only covalent bonding and no ionic bonding?

- Na₂SO₄
- CCl₄
- NaOH
- Ca(NO₃)₂

Question 8

1 pts

How many valence electrons are in a Kr atom?

- 2
- 8
- 7
- 0

Question 9

1 pts

The P²⁻ anion has how many total electrons and how many valence electrons respectively?

- 16, 8

17, 8

17, 6

16, 6

17, 7

16, 7

18, 8

Question 10

1 pts

What total number of valence electrons should appear in the dot formula for the chlorate ion ClO_3^- ?

28

24

26

30

Question 11

1 pts

An element E has the electronic configuration $[\text{Ne}] 3s^2 3p^1$. Write the formula of its compound with sulfate.

E_3SO_4

$\text{E}(\text{SO}_4)_3$

$\text{E}_2(\text{SO}_4)_3$

$\text{E}_3(\text{SO}_4)_2$

E_2SO_4

Question 12

1 pts

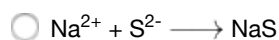
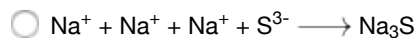
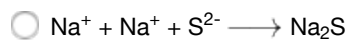
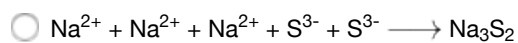
An element E has the electronic configuration $1s^2 2s^2 2p^4$. What is the formula of its compound with lithium?



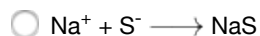
Question 13

1 pts

Which of the following demonstrates the formation of an ionic compound involving the elements Na and S?



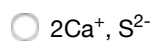
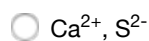
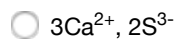
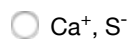
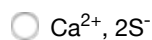
None of these.



Question 14

1 pts

Which of the following is the best representation of the compound calcium sulfide?



Question 15

1 pts

Name the compound CaBr_2 .

- calcium (II) bromide
- calcium bromide
- calcium bromine
- calcium dibromide

Question 16

1 pts

Choose the formula for the compound magnesium sulfide.

- MgS_2
- Mg_2S_3
- MgS
- Mg_2S

Question 17

1 pts

Choose the pair of names and formulae that do not match.

- MgSO_4 : magnesium sulfate
- N_2O_3 : dinitrogen trioxide
- SiCl_4 : silicon tetrachloride
- SnCl_4 : tin (V) chloride
- KNO_3 : potassium nitrate

Question 18

1 pts

What is the formula of dinitrogen pentoxide?

 N_3O_2 N_2O_5 NO N_2O NO_3 **Question 19**

1 pts

Name the compound CaC_2O_4 .

 cadmium oxalate calcium carboxide calcium oxalate calcium carbonate cadmium carboxide**Question 20**

1 pts

Give the formula for sodium nitrate.

 $\text{Na}(\text{NO}_3)_2$ NaNO_3 $\text{Na}(\text{NO})_3$ Na_2NO_3

Quiz saved at 5:23pm

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