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Chemistry_Questions_0053

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1.

Consider the following electron-dot formulas for the elements X and Y.



What are the group numbers of X and Y?

A. 16 & 13
B. 5 & 4
C. 15 & 14

2.

Consider the following electron-dot formulas for the elements X and Y.



b. Will a compound of X and Y be ionic or covalent?

A. covalent
B. ionic

Score: 3/3

3.

Consider the following electron-dot formulas for the elements X and Y.



What ions would be formed by X and Y?

A. +3 & -4
B. -5 & +4
C. -3 & +4
D. +5 & -4

Score: 3/3

4.

Consider the following electron-dot formulas for the elements X and Y.



What would be the formula of a compound between X and Y?

A. X_5Y_4
B. X_3Y_4
C. X_4Y_5
D. X_4Y_3

Score: 3/3

5.

Consider the following electron-dot formulas for the elements X and Y.



What would be the formula of a compound of X and Cl?

A. X_3Cl
B. X_2Cl_3
C. XCl_3
D. X_3Cl_2

Score: 3/3

6.

Complete the following table for atoms or ions:

Atom or Ion	Number of Protons	Number of Electrons	Electrons Lost/Gained
Mg ⁺	1.-----	2.-----	3.----- e 4.-----
5.-----	13	11	6.----- e 7.-----
8.-----	8	9.-----	2 e gained
10.-----	11.-----	28	3 e lost

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.

7.

Name the following compound: Li_2O

A. lithium (II) oxide
B. lithium oxide
C. dilithium oxide

Score: 3/3

8.

Name the following compound: CF_2

A. carbon (II) fluoride
B. carbon tetrafluoride
C. carbon fluoride

9.

Name the following compound: MgF_2

A. magnesium difluoride
B. manganese fluoride
C. magnesium fluoride

Score: 3/3

10.

Name the following compound: CaCl_2

A. calcium (II) chloride
B. calcium dichloride
C. calcium chloride

Score: 3/3

11.

Name the following compound: N_2O

A. dinitrogen oxide
B. nitrogen dioxide
C. nitrogen (II) oxide

Score: 3/3

12.

Name the following compound: CO

A. carbon oxide
B. carbon (II) oxide
C. carbon monoxide

Score: 3/3

13.

name the following compound: K_3PO_4

A. potassium (III) phosphate
B. tripotassium phosphate
C. potassium phosphate

Score: 3/3

14.

Name the following compound: $Ba(NO_3)_2$

A. barium (II) nitrate
B. barium nitride
C. barium nitrate

15.

Classify each of the following as ionic or covalent

$Al_2(CO_3)_3$
SF_6
N_2O
Br_2
Mg_3N_2
SO_2
$CrPO_4$

16.

Select the more polar bond in each of the following pairs:

(A) C-N or (B) C-O
(A) N-F or (B) N-Br
(A) Si-S or (B) Si-Cl
(A) F-Cl or (B) F-Br
(A) P-O or (B) P-S

17.

Classify each of the following bonds as nonpolar covalent, polar covalent, or ionic

N-O
Cl-Cl
Na-Cl
H-H
N-F

18.

Predict the shape and polarity of each of the following molecules. Assume that all bonds are polar

a central atom with two identical bonded atoms and one lone pair
a central atom with three identical bonded atoms and one lone pair
a central atom with four identical bonded atoms and no lone pairs

19.

Predict the polarity of each of the following molecules:

SCl ₂
PCl ₃
GeH ₄
CF ₄
H ₂ O