

Name: SOLUTIONS

Date: JAN 16/15

Chemistry Review Quiz
SNC 1D1

K	$\frac{123}{24}$	T	/8	A	/13
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Multiple Choice: Circle the most correct answer.

[1 K mark each]

<p>1. All elements from Period 2 have</p> <ul style="list-style-type: none">a. 2 valence electronsb. 6 valence electronsC c. 2 shellsd. 2 valence shells <p>2. The name for Group 2 elements are the</p> <ul style="list-style-type: none">A a. Alkaline Earth Metalsb. Alkaline Metalsc. Halogensd. Noble Gases <p>3. The name for Group 18 elements are the</p> <ul style="list-style-type: none">a. Alkaline Earth Metalsb. Alkaline MetalsD c. Halogensd. Noble Gases <p>4. A diatomic molecule is</p> <ul style="list-style-type: none">a. Made up of two different types of atoms bonded togetherB b. Made up of one type of atom bonded to itselfc. Any compound made up of 2 atomsd. An atom with a double nucleus	<p>5. Which the following are not found in the center of an atom?</p> <ul style="list-style-type: none">A a. Electronb. Protonc. Neutrond. Nucleus <p>6. How many valence electrons do the Halogens have?</p> <ul style="list-style-type: none">a. 0b. 1C c. 7d. 8 <p>7. The atoms in molecular compounds are held together with this type of bond:</p> <ul style="list-style-type: none">a. Ionicb. MolecularC c. Covalentd. None <p>8. A cation is a</p> <ul style="list-style-type: none">A a. positively charged ionb. negatively charged ionc. neutral iond. special name for a chlorine ion
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9. Complete the following table:

[0.5 K marks each, total of 9]

Symbol	Name	Atomic Number	Atomic Mass	Number of Protons	Number of Neutrons	Number of Electrons
C	Carbon	6	12.01 OR 12	6	6	6
Si	silicon	14	28.09 OR 28	14	14	14
Se	Selenium	34	79	34	45	34

10. Define "ion": CHARGED PARTICLE/ATOM [1 K mark]

11. Define "isotope": ATOM WITH SAME NUMBER OF PROTONS [1 K mark]

BUT DIFFERENT NUMBER OF NEUTRONS

12. Draw a Bohr-Rutherford diagram for a Sulfur Atom and Sulfur Ion

Sulfur Atom [2 K marks]	Sulfur Ion [3 K marks]
<p>16 P⁺ 16 E⁻ 32 - 16 = 16 N⁰</p>	

13. Count how many atoms are in each of the chemical formulas below by completing the tables: [3 A marks each]

a) NaNO_3

Type of Atom	# of Atoms
Na	1
N	1
O	3
Total # of Atoms	5

b) $\text{Zn}_3(\text{PO}_4)_2$

Type of Atom	# of Atoms
Zn	3
P	2
O	8
Total # of Atoms	13

c) $2\text{K}_2\text{CrO}_4$

Type of Atom	# of Atoms
K	$2 \times 2 = 4$
Cr	$1 \times 2 = 2$
O	$4 \times 2 = 8$
Total # of Atoms	14

14. Identify if each of the following compounds is ionic or molecular [1 A mark each]

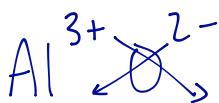
- a) CaF_2 ionic or molecular (circle one)
- b) H_2O ionic or molecular (circle one)
- c) PO_4 ionic or molecular (circle one)
- c) AuCl_3 ionic or molecular (circle one)

15. Draw Lewis Dot Diagrams to determine the chemical formula of the following compounds: [6 T marks]

	Lewis Diagram [2 marks each]	Chemical Formula [1 mark each]
a) Calcium + Sulfur	<p> $[Ca]^{2+} [S]^{2-}$ </p>	CaS
b) Lithium + Oxygen	<p> $[Li]^+ [O]^{2-} [Li]^+$ </p>	Li ₂ O

16. Use the crossover method to determine the chemical formula for the following compound. Then name the compound: [2 T marks]

Aluminum + Oxygen



Chemical formula: Al₂O₃

Compound name: Aluminum oxide