

Chemistry I-III Practice Quest

/30

Name: *Key*
 Date:
 Block:

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

- (1) On your own (2) With your notes (3) With another student

1

2

3

Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

Multiple Choice. Choose the BEST answer (1 mark each)

b 1. Ions of the same element have the same number of...

- a. Electrons
- b. Protons
- c. Atoms
- d. Ions

d 2. Which of the following is correctly paired?

- a. Element – Air *(homogeneous)*
- b. Compound – Coffee *(homogeneous)*
- c. Homogenous mixture – Copper *(element)*
- d. Heterogeneous mixture -Cereal

b 3. Which of the following would be an example of a chemical change?

- a. Boiling water
 - b. Firewood burning
 - c. Cutting paper
 - d. Mixing cake batter
- change in colour
 change in odour
 new substance is formed .
 release of heat + light*

c 4. If an element can be stretched into thin long wires, the element is said to be...

- a. Shiny
- b. Brittle
- c. Ductile
- d. Malleable *-hammered into a thin sheet*

d 5. Which of the following elements is the LEAST reactive?

- a. Fluorine *Halogen*
 - b. Lithium *Alkali metal*
 - c. Aluminum
 - d. Argon
- } very reactive!*
*↳ Noble gas .
 ↳ stable + unreactive*

Short Answers.

6. Discuss how the earliest forms of the periodic table was ordered. (2 marks)

Mendeleev's table was ordered by increasing atomic mass

↳ Grouped elements into "families" based on similar properties

↳ left gaps to predict existence of elements not yet discovered

7. Which scientist was responsible for changing the periodic table to its modern form? (1 mark)

Henry Moseley

↳ Discovered the atomic number (# protons)

8. Why are families grouped together? (1 mark)

Families are grouped together because they share similar chemical + physical properties (ex: reactivity)

9. Complete the following table: (0.25 marks each / 7 marks)

Name	Symbol	Atomic Number	# of Protons	# of Electrons	# of Neutrons	Atomic Mass	Ion charge	Period #	Group #	Metal, Non-metal or Metalloid?
Aluminum Atom	Al	13	13	13	14	27	0	3	13	Metal
Oxygen ion	O ²⁻	8	8	10	8	16	2-	2	16	Non-metal
Calcium Ion	Ca ²⁺	20	20	18	20	40	2+	4	2	Metal

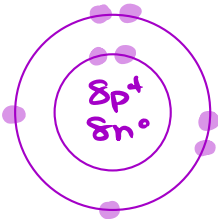
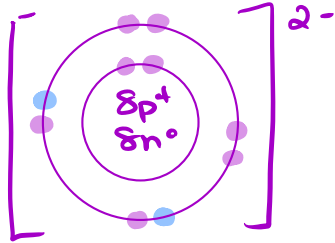
10. What are TWO distinctive properties of METALLOID elements? (2 marks)

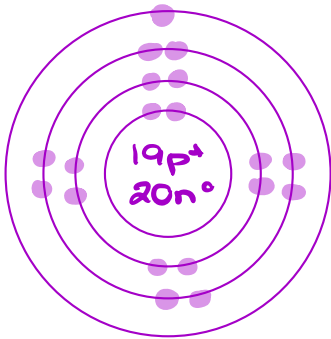
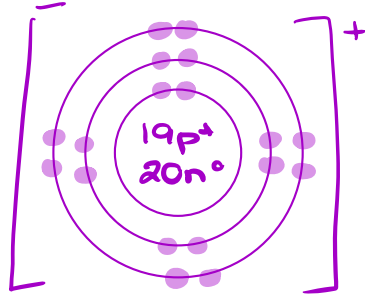
a. Shiny (like metals)

b. Brittle + not ductile (like non-metals)

c) Poor conductors of heat + electricity (like non-metals)

11. Draw a Bohr model for the following elements: (3 marks each)

Oxygen Atom	Oxygen Ion
	
<p># of Protons: <u>8</u> # of Neutrons: <u>8</u> # of Electrons: <u>8</u></p>	<p># of Protons: <u>8</u> # of Neutrons: <u>8</u> # of Electrons: <u>10</u></p>

Potassium Atom	Potassium Ion
	
<p># of Protons: <u>19</u> # of Neutrons: <u>20</u> # of Electrons: <u>19</u></p>	<p># of Protons: <u>19</u> # of Neutrons: <u>20</u> # of Electrons: <u>18</u></p>