REVIEW

Chapter 5 : Lesson 5A

1. Use the words in the Word Bank to help you formulate a complete explanation of the Bohr Model :

Ground State	more	Energy Levels	less	Excited State

Electrons within an atom orbit the nucleus in specific "shells" called _____ .

These Energy Levels are at increasing distances from the nucleus : Electrons in Energy Levels closer to the nucleus, have _____ energy. Electrons in Energy Levels further away from the nucleus have _____ energy.

Electrons that absorb energy, can "jump" to higher Energy Levels. These Electrons are said to be in a(n) _____ state. Electrons that lose energy can fall back to lower Energy Levels and are said to be in a(n) _____ state.

2. Select all the statements that are TRUE about Valence Electrons.

A) They are the Electrons in the Outermost Shell, furthest away from the nucleus.

B) They are the Electrons in the Inner Shells, closer to the nucleus.

C) They determine how chemically reactive an atom is.

D) They do not take part in chemical reactions.

3. Select all the statements that are TRUE regrading the "Octet Rule".

A) All atoms are always in a chemically stable state.

B) Atoms will always strive to become chemically stable.

C) Atoms will always strive to obtain a Valence Shell configuration with 8 Electrons.

D) Atoms can gain or lose Electrons in order to obtain a full Valence Shell.

E) All Elements in Group 8 of the Periodic Table fulfill the Octet Rule.

LIVEWORKSHEETS

4. Use the Bohr diagram to help you answer the questions that follow :

Which element (name) is represented by this Bohr diagram ? _____

What is its Atomic Number ? _____

In what Period in the Periodic Table is this element ? _____

How many Energy Shells / Levels does it have ? _____

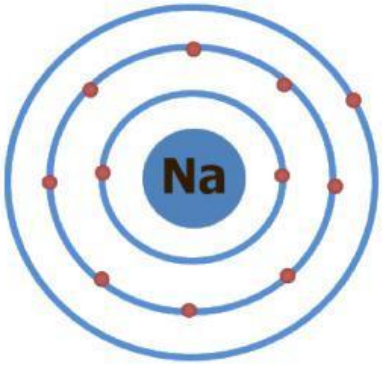
How many Electrons does it have in total ? _____

How many Valence Electrons does it have ? _____

Does it fulfill the Octet Rule ?

Is it chemically stable ?

Will it partake in chemical reactions ?



5. Use the Bohr diagram to help you answer the questions that follow :

Which element (name) is represented by this Bohr diagram ? _____

What is its Atomic Number ? _____

In what Period in the Periodic Table is this element ? _____

How many Energy Shells / Levels does it have ? _____

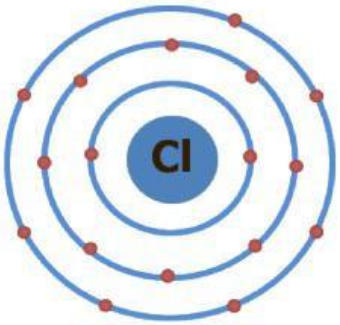
How many Electrons does it have in total ? _____

How many Valence Electrons does it have ? _____

Does it fulfill the Octet Rule ?

Is it chemically stable ?

Will it partake in chemical reactions ?



Do you think that Na (in Question 4) will chemically react with Cl (Question 5) ?

Why or Why not ? Select the correct reason.

A) Both elements are stable and both have full Valence Shells.

B) Both elements are unstable. In order to get stable, Chlorine will strive to gain the 1 Valence Electron that Sodium will strive to shed.

C) Both elements are unstable. In order to get stable, Chlorine will strive to shed 7 Valence Electrons which Sodium will strive to gain.

D) One of them are stable, while the other is unstable.

LIVEWORKSHEETS

6. Use the Bohr diagram to help you answer the questions that follow :

Which element (name) is represented by this Bohr diagram ? _____

What is its Atomic Number ? _____

In what Period in the Periodic Table is this element ? _____

How many Energy Shells / Levels does it have ? _____

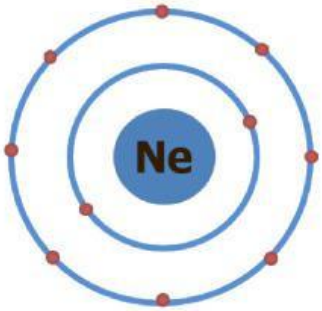
How many Electrons does it have in total ? _____

How many Valence Electrons does it have ? _____

Does it fulfill the Octet Rule ?

Is it chemically stable ?

Will it partake in chemical reactions ?



Do you think that Cl (in Question 5) will chemically react with Ne (Question 6) ?

Why or Why not ? Select the correct reason.

A) Both elements are stable and both have full Valence Shells.

B) Both elements are unstable. They will exchange Valence Electrons so that both can have full Valence Shells.

C) Neon is stable, but Chlorine is unstable.

D) Neon is unstable, but Chlorine is stable.

E) Neon will gain the Valence Electrons that Chlorine will shed.

LIVEWORKSHEETS