Atoms – Short Answer Questions

1. What are the 3 main particles found in atoms? Which one is positive, which is negative, which is neutral?

2. Where do you find the protons, neutrons and electrons in an atom?

3. What does an atoms number on the periodic table tell you about how many protons it has?

4. What is an atom with an uneven number of protons and electrons called? If it is positively charged what is it called? If it is negatively charged what is it called?

5. What is the maximum number of electrons that can be held in the first 2 orbitals?

6. What are the 4 stable electron configurations available for the first 20 atoms?

7. Which of the first 20 atoms are noble (Inert) gases and have stable configurations in there neutral form? In what column of the periodic table do we find these atoms?

8. Which of the first 20 atoms on the periodic table lose an electron to become 1+ ions?

9. Atom # 20 on the periodic table is Calcium. How many electrons does it lose to attain stability?

10. Which atoms in the first 20 tend to become 1- ions?

11. What column on the periodic table do you find atoms that become 1- ions?

12. Atom #19, Potassium has 19 protons. It would need _____ electrons to become stable and would therefore become a _____ ion.

1. What are the 3 main particles found in atoms? Which one is positive, which is negative, which is neutral?
Protons – Positive
Electrons – Negative
Neutrons – Neutral

2. Where do you find the protons, neutrons and electrons in an atom?
Protons and neutrons are found in the nucleus – electrons are found in electron orbitals surrounding the nucleus.

3. What does an atoms number on the periodic table tell you about how many protons it has?
The number of an atom on the periodic table tells you the number of protons. Eg. Helium #2 on the periodic table has 2 protons.

4. What is an atom with an uneven number of protons and electrons called? If it is positively charged what is it called? If it is negatively charged what is it called?
An atom with an uneven number protons and electrons is called an ion. Positively charged = cation. Negatively charged = anion.

5. What is the maximum number of electrons that can be held in the first 2 orbitals?
10

6. What are the 4 stable electron configurations available for the first 20 atoms?
A total of 0 electrons / a total of 2 electrons / a total of 10 electrons / a total of 18 electrons

7. Which of the first 20 atoms are noble (Inert) gases and have stable configurations in there neutral form? In what column of the periodic table do we find these atoms?
#2 Helium
#10 Neon
#18 Argon

8. Which of the first 20 atoms on the periodic table lose an electron to become 1+ ions?
#3 Lithium
#11 Sodium
19 Potassium

9. Atom # 20 on the periodic table is Calcium. How many electrons does it lose to attain stability?
2

10. Which atoms in the first 20 tend to become 1- ions?
#9 Florine
#17 Chlorine

11. What column on the periodic table do you find atoms that become 1- ions?
2nd Last column.

12. Atom #19, Potassium has 19 protons. It would need to lose _____ electrons to become stable and would therefore become a _____ ion.
It would lose 1 electron to become a 1+ cation – (K+)