

Dougherty Valley HS Chemistry
Evidence of Grudge Ball Participation – Questions

S – 21B

Name:

Period:

Seat#:

Directions: Any questions that were not completed in class as part of the Grudge Ball Game need to be finished as homework. Here are all the questions that were part of the review game if you missed any during the game, didn't finish the game in class, or you were absent. Remember to show work for ANY math problems, include ALL units, and non-math questions should have good/detailed answers but do not need to be in sentence form unless asked for specifically.

- 1) Which element is this? $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^5$
- 2) Give name and write out noble gas notation:
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^2$
- 3) What does the Pauli Exclusion Principle say?
- 4) What does the Aufbau Principle say?
- 5) Draw the orbital diagram for carbon. How many unpaired e- does it have?
- 6) What is the noble gas configuration for calcium?
- 7) How many unpaired electrons are in chromium?
- 8) How many orbitals in a set of each type/shape orbital?
- 9) What is the highest energy level in the element below:
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$
- 10) Which element might form a ion by losing electrons from the s and d orbitals F, S, Li, Ti
- 11) What is the atomic radius?
- 12) Atomic radius increases as you go (left or right?) and (up or down?)
- 13) Atomic radius decreases going right because _____ and increases going down because _____
- 14) Order these elements from smallest to largest?
Se, S, Cl Na
- 15) Of the elements in the alkaline earth metals which has the highest electronegativity
- 16) Why does it take less energy to remove e- as you go down a group?
- 17) Describe the trend for reactivity of halogens.
- 18) What is the sum of the charges from the atoms below when they are ions? Calcium, nitrogen, and strontium
- 19) How many electrons are in a set of p orbitals?
- 20) What is the term for the ability of metals to be pounded and shaped into sheets?
- 21) What is the definition of ionization energy?
- 22) Predict the ions of the following atoms and then rank the ions from smallest to largest radius S, P, Cl, Ca, K
- 23) Electronegativity increases going (left or right?) and increases going (up or down?)
- 24) Which element is in period 4 group 3B
- 25) Draw a diagram for absorption and emission.
- 26) What is the e- configuration for copper (II)?
- 27) How many electrons can fit in a d orbital?
- 28) Electronegativity (increases or decreases?) as you move down a group. WHY?
- 29) Does Metallic Character (reactivity) increase or decrease going down a group?
- 30) Define "effective nuclear charge."
- 31) Give an example of two ions that each have a larger atomic radius than their neutral parent atom.