

Periodic Table & Oxidation States

Which group of the periodic table is most likely described by questions 1-5?

1. These elements are very strong oxidizers: _____
2. These elements have a +2 when forming ionic compounds: _____
3. These elements are almost entirely unreactive: _____
4. Why are they the most unreactive: _____
5. These elements are radioactive: _____
6. These elements are diatomic: _____
7. These elements are found in Group 1 periodic table: _____
8. These elements are rare, have high densities, are generally used for industrial purpose: _____

Describe the oxidation state of each element when it forms ionic compounds:

9. oxygen _____ 10. gallium _____ 11. potassium _____ 12. nitrogen _____

Determine the number of valence electrons in the following elements:

11. sulfur _____ 14. carbon _____ 15. helium _____ 16. hydrogen _____

17. What are the first three elements to have complete outer shells? Give name and symbol.

18. What are the first three elements to have only one valence electron? Name and symbol.

19. What happens to the number of valence electrons as you move across the table (left→right)?

20. What happens to the number of energy levels (n) as you move down a row (column)?

21. In what family are the following classified?

Radium _____ Tin _____
Iodine _____ Cesium _____

22. Using your knowledge of rows what would you predict the valence electrons to be:

Barium: _____ Lead: _____ Bismuth: _____ Potassium: _____