

Ch. G11-Q2W2- H.W.-Periodic properties of elements

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ____ 1. Transition elements, such as chromium, are likely to have ____.
- multiple oxidation numbers
 - an oxidation number of 1+
 - an oxidation number of 2+
 - a negative oxidation number
- ____ 2. Group 13 elements tend to form ____.
- covalent compounds
 - ionic compounds
 - alloys
 - metalloids
- ____ 3. Compared to the neutral atom from which it is derived, a negative ion is ____.
- always larger
 - larger in some cases and smaller in others
 - always smaller
 - the same size
- ____ 4. The most important alloy of zinc contains copper and is called ____.
- steel
 - brass
 - slag
 - zinc oxide
- ____ 5. The most important use of lead is in ____.
- paint pigment
 - pewter
 - batteries
 - solder
- ____ 6. At what sublevel does the final electron enter a transition metal?
- d sublevel
 - f sublevel
 - p sublevel
 - s sublevel
- ____ 7. Transition metals have multiple oxidation states because of the involvement of the ____ electrons in chemical bonding.
- d
 - f
 - p
 - s
- ____ 8. Which of the following elements is not in the iron triad?
- cobalt
 - iron
 - copper
 - nickel
- ____ 9. A metallic ion is ____ its corresponding atom.
- larger than
 - the same size as
 - smaller than
 - impossible to compare with
- ____ 10. Each row in the periodic table ends with a ____.
- noble gas
 - metalloid
 - nonmetal
 - metal
- ____ 11. What is the trend in the melting point of d-block elements across a period?
- The melting point increases from left to right.
 - The melting point first increases and then decreases from left to right.
 - The melting point remains the same.
 - The melting point decreases from left to right.
- ____ 12. Active metals are in the ____ region of the periodic table.
- d
 - s
 - f
 - p

- _____ 13. The valence configuration shared by carbon, silicon, and germanium is _____.
a. $2s^22p^6$ c. $1s^22s^22p^2$
b. s^2p^2 d. s^2p^4
- _____ 14. What ions present in hard water interfere with the action of soaps and detergents, making it difficult to wash grease and oil from utensils and clothes?
a. Calcium c. Sodium
b. Potassium d. Hydrogen
- _____ 15. The inner transition elements are found in the _____ block of the periodic table.
a. *s* c. *d*
b. *p* d. *f*
- _____ 16. When compared to the main group metals, transition metals have melting and boiling points that are _____.
a. about the same c. always lower
b. usually lower d. usually higher
- _____ 17. Which of the following is an alkaline earth metal?
a. Sodium c. Iron
b. Beryllium d. Potassium
- _____ 18. In general, main group elements have _____ melting points and boiling points when compared with transition metals.
a. the same c. much lower
b. higher d. slightly lower
- _____ 19. The atoms of an element in Group 2 are _____ atoms of a Group 13 element in the same period.
a. the same size as c. impossible to compare with
b. larger than d. smaller than
- _____ 20. Plants need the alkaline earth element _____ in photosynthesis.
a. barium c. magnesium
b. calcium d. Strontium

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