Periodic Table Practice Worksheet - Set II

Name: _____ Class: _____ Date: _____ Total: 40 marks

A. MCQs — 10 × 1 = 10

1. The atomic number of an element represents the number of: A) neutrons B) protons C) nucleons D) shells

2. Which element belongs to Group 18? A) Cl B) O C) Ne D) Na

3. Which is a metalloid? A) Na B) Si C) Cl D) Mg

4. Which element has the greatest atomic radius? A) Li B) Na C) K D) Rb

5. Which element is most electronegative? A) F B) Cl C) Br D) I

6. Elements in the same group generally have similar:
A) atomic masses B) numbers of shells C) valence-electron configurations D) atomic numbers

7. Which is an alkali metal? A) Ca B) K C) Al D) Ne

8. An element with electronic configuration 2,8,7 belongs to: A) Group 1 B) Group 2 C) Group 17 D) Group 18

9. Which element is in Period 3? A) Mg B) Ca C) K D) Ne

10. Across a period from left to right, metallic character generally:
A) increases B) decreases C) remains constant D) first increases, then decreases

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B. Identify the Element — 8 × 1 = 8

11. Atomic number = 12 → _____
12. Atomic number = 17 → _____
13. Symbol for potassium → _____
14. Element in Group 2, Period 3 → _____
15. Element in Group 17, Period 2 → _____
16. Noble gas in Period 3 → _____
17. Element with 19 electrons in a neutral atom → _____
18. Element with electronic configuration 2,8,1 → _____

C. Structure & Classification — 7 × 1 = 7

19. Number of protons in Al = _____
20. Number of electrons in neutral sulfur = _____
21. Number of valence electrons in Mg = _____
22. Number of occupied shells in Na = _____
23. Classify Si: metal / nonmetal / metalloid → _____
24. Classify Cl: metal / nonmetal / metalloid → _____
25. Classify Fe: metal / nonmetal / metalloid → _____

D. Periodic Trends — 7 × 1 = 7

26. Atomic radius generally _____ across a period.

27. Atomic radius generally _____ down a group.

28. Ionization energy generally _____ across a period.

29. Electronegativity generally _____ down a group.

30. Which is larger: Na or Cl? _____

31. Which has greater ionization energy: Na or Mg? _____

32. Which is more metallic: Li or Cs? _____

E. Higher-Order Questions — 8 × 1 = 8

33. An element has 3 shells and 1 valence electron. Identify the element.

Answer: _____

34. Element X has atomic number 16. State its group, period, and valence electrons.

Answer: _____

35. Why do Na and K have similar chemical properties?

36. X has configuration 2,8,8,1. Y has configuration 2,8,7.
Which element is more likely to gain an electron? _____

37. Arrange Li, Na, and K in **increasing atomic radius**.

38. Arrange F, Cl, and Br in **decreasing electronegativity**.

39. An element is located in Group 18 and Period 2.
Identify it and write its electronic configuration.

40. Element X is in Period 3 and has 6 valence electrons.
Identify X and explain how you determined it.

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