Periodic Table & Subshell Electronic Configuration

STUDENT PRACTICE WORKSHEET

Name: _____ Date: _____ Score: _____ / 10

Q1. What is the maximum number of electrons that can be accommodated in the d-subshell?

(A) 2 (B) 6

(C) 10 (D) 14

Calculation / Rough Work Space

Q2. Which block in the periodic table contains elements with valence electrons entering the s-subshell?

(A) s-block (B) p-block

(C) d-block (D) f-block

Calculation / Rough Work Space

Q3. What is the subshell electronic configuration of Sodium (Na, Atomic Number 11)?

(A) 1s^2 2s^2 2p^6 3s^1 (B) 1s^2 2s^2 2p^5 3s^2

(C) 1s^2 2s^2 2p^7 (D) 1s^2 2s^4 2p^5

Calculation / Rough Work Space

Q4. How is the period number of an element determined from its subshell configuration?

(A) Number of valence electrons (B) Highest principal quantum number (shell number)

(C) Total number of subshells (D) Atomic mass

Calculation / Rough Work Space

Q5. What is the group number of an element with outer configuration 3s^2 3p^4?

(A) Group 4 (B) Group 6

(C) Group 14 (D) Group 16

Calculation / Rough Work Space

Q6. Which block of elements generally exhibit variable oxidation states?

(A) s-block

(B) p-block

(C) d-block

(D) Noble gases

Calculation / Rough Work Space

Q7. What is the oxidation state of Fe in FeCl3?

(A) +1

(B) +2

(C) +3

(D) -3

Calculation / Rough Work Space

Q8. Which subshell has lower energy and is filled before 3d?

(A) 3p

(B) 4s

(C) 4p

(D) 3s

Calculation / Rough Work Space

Q9. Elements in Group 18 of the periodic table are known as:

(A) Alkali Metals

(B) Halogens

(C) Noble / Inert Gases

(D) Lanthanides

Calculation / Rough Work Space

Q10. What is the noble gas shorthand configuration for Chlorine (Cl, Atomic Number 17)?

(A) [Ne] 3s^2 3p^5

(B) [Ar] 4s^1

(C) [He] 2s^2 2p^6

(D) [Ne] 3s^1 3p^6

Calculation / Rough Work Space