

#26

- QOD #26** How many valence electrons does an element with the electron configuration  $1s^2 2s^2 2p^3$  have?
- (A) 2      (B) 3      (C) 5      (D) 7

#28

- Given the electron configuration:**  
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$
- #28 To what *group* does this element belong?
- (A) 4      (B) 14      (C) 16      (D) 6

#30

- Which list of elements contains a metal, a metalloid, a nonmetal, and a noble gas?
- (a) Be, Si, Cl, Kr      (b) K, Fe, B, F  
 (c) C, N, Ne, Ar      (d) Na, Zn, As, Sb

#32

- # 32 Which orbital notation correctly represents the highest occupied energy level of a nitrogen atom in the ground state?
- (A)  $\frac{\uparrow\downarrow}{2s}$      $\frac{\uparrow}{2p}$   $\frac{\uparrow}{2p}$   $\frac{\uparrow}{2p}$       (B)  $\frac{\uparrow\downarrow}{2s}$      $\frac{\uparrow\downarrow}{2p}$   $\frac{\uparrow}{2p}$   $\text{---}$
- (C)  $\frac{\uparrow\downarrow}{2s}$      $\frac{\uparrow\downarrow}{2p}$   $\frac{\uparrow}{2p}$   $\frac{\uparrow}{2p}$       (D)  $\frac{\uparrow\downarrow}{2s}$      $\frac{\uparrow\downarrow}{2p}$   $\frac{\uparrow\downarrow}{2p}$   $\text{---}$

#34

**#34** What is the most likely oxidation number of the element located in Group 16, Period 3?

(A) +6

(B) -6

(C) +2

(D) -2

#36

QOD #36

Which of these types of EM radiation has the highest energy?



microwaves



infrared



visible light



x-rays