

**AP MULTIPLE CHOICE QUESTIONS
CH. 8, SET 1**

1999

First	Second	Third	Fourth	Fifth
580	1815	2740	11,600	14,800

37. The ionization energies for element X are listed in the table above. On the basis of the data, element X is most likely to be

- (A) Na (D) Si
(B) Mg (E) P
(C) Al

40. Of the following molecules, which has the largest dipole moment?

- (A) CO (D) HF
(B) CO₂ (E) F₂
(C) O₂

50. In the periodic table, as the atomic number increases from 11 to 17, what happens to the atomic radius?

- (A) it remains constant (D) it decreases only
(B) it increases only (E) it decreases, then increases
(C) it increases, then decreases

56. A yellow precipitate forms when 0.5 M NaI (aq) is added to a 0.5 M solution of which of the following ions?

- (A) Pb²⁺ (aq) (D) SO₄²⁻ (aq)
(B) Zn²⁺ (aq) (E) OH⁻ (aq)
(C) CrO₄²⁻ (aq)

1984

41. Which of the following molecules has the shortest bond length?

- (A) N₂ (D) Br₂
(B) O₂ (E) I₂
(C) Cl₂

60. Which of the following has a zero dipole moment?

- (A) HCN (D) NO₂
(B) NH₃ (E) PF₅
(C) SO₂

80. For which of the following molecules are resonance structures necessary to describe the bonding satisfactorily?

- (A) H₂S (B) SO₂ (C) CO₂
(D) OF₂ (E) PF₅

AP Chem Test 1

21. Which of the following elements is the least electronegative?

- (A) Al (D) Na
(B) Br (E) Li
(C) F

65. The type of bonding in carbon tetrachloride (CCl₄) is:

- (A) ionic
(B) covalent
(C) polar covalent
(D) coordinate covalent
(E) hydrogen