

**AP MULTIPLE CHOICE QUESTIONS
CH. 13, SET 4**

1989

Questions 4 – 7

- a. $1s^2 2s^2 2p^5 3s^2 3p^5$
 b. $1s^2 2s^2 2p^6 3s^2 3p^6$
 c. $1s^2 2s^2 2p^6 2d^{10} 3s^2 3p^6$
 d. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$
 e. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 4s^2$
4. An impossible electronic configuration.
 5. The ground-state configuration for the atoms of a transition element.
 6. The ground-state configuration of a negative ion of a halogen.
 7. The ground-state configuration of a common ion of an alkaline earth element.
47. CCl_4 , CO_2 , PCl_3 , PCl_5 , SF_6
 Which of the following does not describe any of the molecules above?
 (A) linear (D) tetrahedral
 (B) octahedral (E) trigonal pyramidal
 (C) square planar
62. As the temperature is raised from $20^\circ C$ to $40^\circ C$, the average kinetic energy of neon atoms changes by a factor of
 (A) $\frac{1}{2}$ (D) 2
 (B) $(313/293)^{1/2}$ (E) 4
 (C) $313/293$

1994

47. Which of the following has the lowest conductivity?
 (A) 0.1 M $CuSO_4$ (D) 0.1 M HF
 (B) 0.1 M KOH (E) 0.1 M HNO_3
 (C) 0.1 M $BaCl_2$
60. $I_2(g) + 3Cl_2(g) \rightarrow 2ICl_3(g)$
- | <u>Bond</u> | <u>Average Bond Energy</u>
<u>(kilojoules/mole)</u> |
|-------------|--|
| I-I | 149 |
| Cl-Cl | 239 |
| I-Cl | 208 |
- According to the data in the table, what is the value of H° for the reaction represented above?
 (A) -860 kJ (D) +450 kJ
 (B) -382 kJ (E) +1248 kJ
 (C) +180 kJ