CHAPTER 8 HOMEWORK

CHM 1045 FALL 2013

NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE\_\_\_\_\_\_\_\_\_\_\_\_

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| 1. | Which principle or rule is violated by the following orbital diagram of an atom in its ground state?  1s 2s 2p | |
| A) | Pauli exclusion principle |
| B) | Building-up principle |
| C) | Hund's rule |
| D) | Heisenberg uncertainty principle |
| E) | No rules or principles are violated by this orbital diagram. |

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| 2. | Which ground-state electron configuration is incorrect? | |
| A) | Fe: [Ar] 3d5 |
| B) | Ca: [Ar] 4s2 |
| C) | Mg: 1s2 2s2 2p6 3s2 |
| D) | Co: [Ar] 3d7 4s2 |
| E) | Kr: [Ar] 3d10 4s2 4p6 |

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| 3. | Which principle or rule is violated by the following orbital diagram of an atom in its ground state?  1s 2s 2p | |
| A) | Pauli exclusion principle |
| B) | Aufbau principle |
| C) | Hund's rule |
| D) | Heisenberg uncertainty principle |
| E) | No rules or principles are violated by this orbital diagram. |

4. Briefly describe the difference between electronegativity and electron affinity.

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| 5. | A section of the periodic table with all identification features removed is shown below.   |  |  |  | | --- | --- | --- | | V | W | X | |  | Y | Z |   Which element has the smallest atomic radius? | |
| A) | V |
| B) | W |
| C) | X |
| D) | Y |
| E) | Z |