**Organic Chemistry Practice Multiple Choice Question Set 4**

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| **1. The best nomenclature for the geometry of the following compound is...** http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc1.gif |
|  | [(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc1a.htm) | *cis-* |
|  | [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc1b.htm) | *trans-* |
|  | [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc1c.htm) | E- |
|  | [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc1d.htm) | Z- |
|  |  |  |
| **2. Arrange the following groups in decreasing order of priority for E/Z nomenclature with the highest priority group listed first.** http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc2.gif |
|  | [(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc2a.htm) | B>A>C |
|  | [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc2b.htm) | B>C>A |
|  | [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc2c.htm) | A>C>B |
|  | [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc2d.htm) | C>A>B |
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| **3. What is the best name for the following compound?** http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc3.gif |
|  | [(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc3a.htm) | 3-methylenehexane |
|  | [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc3b.htm) | 2-propyl-1-butene |
|  | [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc3c.htm) | 4-ethyl-4-pentene |
|  | [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc3d.htm) | 2-ethyl-1-pentene |
|  |  |  |
| **4. What is the best name for the following compound?** http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc4.gif |
|  | [(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc4a.htm) | 2-methylcyclohexene |
|  | [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc4b.htm) | 3-methylhexene |
|  | [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc4c.htm) | 1-methylcyclohex-2-ene |
|  | [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc4d.htm) | 3-methylcyclohexene |
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| **5. The mechanism of the reaction of propene with H3O+ will proceed through which of the following intermediates?** |
| http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc5.gif |
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| **6. The reaction of propene with HBr in the presence of ROOR (peroxide) proceeds through which of the following intermediates?** |
| http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc6.gif |
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| **7. What is the major product expected from the following reaction?** |
| http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc7.gif |
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| **8. What is the major product expected from the following reaction?** |
| http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc8.gif |
|  |  |  |
| **9. What is the major product expected from the following reaction?** |
| http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc9.gif |
|  |  |  |
| **10. The mechanism of the reaction of propene with HOCl (Cl2 + H2O) will proceed through which of the following intermediates?** |
| http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol4/v4_omc10.gif |

**11. Which of the following transitions is the highest energy transition?** [(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc1a.htm) n to  [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc1b.htm) n to  [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc1c.htm)  to  [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc1d.htm)  to 

**12. Which of the following alkenes would have the largest max?**



**13. Which of the following alkenes would have the largest max?**



**14. What is the max for the following compound? Use the provided parameters for your calculation.**



[(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc4a.htm) 234 nm [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc4b.htm) 244 nm [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc4c.htm) 273 nm [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc4d.htm) 283 nm

**15. What is the max for the following compound? Use the above parameters for your calculation.**



[(a)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc5a.htm) 229 nm [(b)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc5b.htm) 249 nm [(c)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc5c.htm) 254 nm [(d)](http://chemistry.boisestate.edu/people/richardbanks/organic/mc/vol5/v5_omc5d.htm) 259 nm