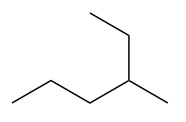
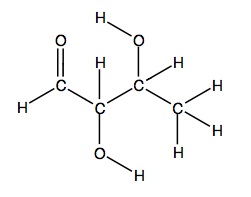
Electrochemistry Part V

1. What is the correct name for the compound depicted in the skeletal structure below?  
   
2. Which of the following is a structural isomer of 3-ethylheptane? Choose from:

|  |
| --- |
| 2-methylbutane |
| cyclohexane |
| 3,4-dimethylpentane |
| 3-ethylnonane |
| 4-methyloctane |

1. How many of the carbons in the molecule depicted below are chiral?  
   
2. What is the cell potential for the reactionMg(s)+Fe 2+ (aq)→Mg 2+ (aq)+Fe(s) at 67 ∘ C when [Fe 2+ ]= 3.80M and [Mg 2+ ]= 0.310M.Express your answer to three significant figures and include the appropriate units.
3. Calculate the standard free-energy change at 25 ∘ C ^ \circ \rm Cfor the following reaction: Mg(s)+Fe 2+ (aq)→Mg 2+ (aq)+Fe(s) Express your answer to three significant figures and include the appropriate units.