I. Match each substituted cyclohexane structure with the correct chair conformation by placing the corresponding letter in the blank space. (6 points)

II. Sighting down the C2-C3 bond, draw Newman projections of the most and least stable conformations of 2-Methylbutane. (4 points)

III. In each series, circle the compound with the largest heat of combustion (i.e. most negative delta H of combustion). (4 points)

IV. Circle all of the compounds which could serve as a starting material for each indicated synthesis scheme. (6 points)