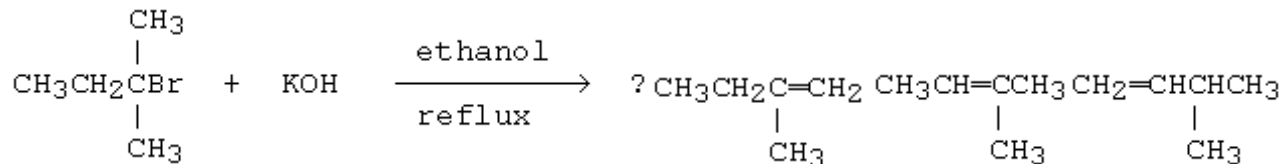
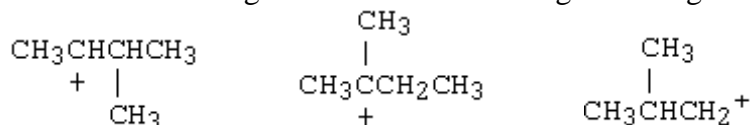


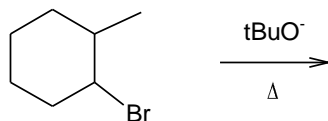
1) Which alkene will form from the following reaction?



2) Which of the following carbocation will undergo rearrangement?

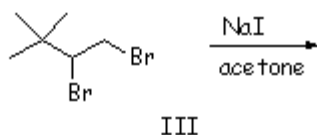
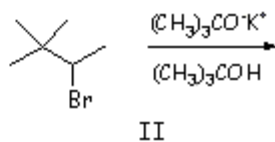
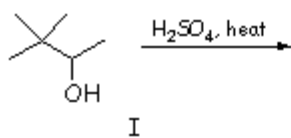
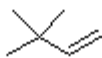


3) Write the mechanism for the following E1 reaction. Rearrangement will occur in this reaction. Start by forming a carbocation, move it to a more stable position, then see where you have  $\beta$ -H to eliminate. You should form two products. Which is major? Label them as Zaitsev's and Hoffman products.



4) When 2,2-dimethylcyclo-1-hexanol is dehydrated it gives at least two alkenes, one major and one minor. Give a mechanism for this reaction. Which product is the higher ratio product?

- 5) Which of the following reactions would produce the following alkene in a reasonable percentage yield, i.e., greater than 50%?



- 6) Which product (or products) would be formed in appreciable amount(s) when trans-1-bromo-2-methylcyclohexane undergoes dehydrohalogenation upon treatment with sodium ethoxide in ethanol?

