• Draw the structure(s) of the major organic product(s) formed in each of the following reactions. Give the names of the products where requested.

Marks 5

Name(s): (E)-3-methylhex-3-ene (Z)-3-methylhex-3-ene

$$OH \xrightarrow{Cr_2O_7^{2\Theta}/H^{\oplus}/H_2O} OH$$

Name(s): 1-bromo-1-methylcyclohexane

$$\begin{array}{c|c} O \\ \hline \\ N \end{array} \qquad \begin{array}{c} H^{\oplus}/\operatorname{H}_2O \ / \ \text{heat} \end{array} \qquad \begin{array}{c} O \\ \hline \\ C \end{array} \qquad \begin{array}{c} C \\ \hline \\ CH_3 \end{array}$$