1. Circle the major product for the following reactions. (2 points)

i. H_2N-NH_2 H_2N H_2N

- 2. Provide the major product for the following reactions. (2 points)

i. O $\frac{\text{MeNH}_2}{\text{[TsOH]}}$ ii. O $\frac{\text{Me}_2\text{NH}}{\text{[TsOH]}}$ $-\text{H}_2\text{O}$

3. Provide a mechanism to account for each of the following reaction. (6 points)

MeOH MeO OME

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