5A) (8 pts) Provide a <u>complete</u> mechanism for the following reaction. Pay close attention to details, including lone pairs, formal charges and the use of curved arrows.

$$OH + O \longrightarrow H_2SO_4 \longrightarrow HO \longrightarrow O$$

5B) (10 pts) Name the following compounds according to the IUPAC rules. Be sure to indicate stereochemistry, when appropriate. You must show your work for full credit.