## **Alcohols Phenols and Ethers**

- 1. Draw the **structures** corresponding to the following **IUPAC names**.
  - a. Cyclohex-3-en-1-ol.
  - b. p-Bromophenol.
  - c. Hexane-1,5-diol.
  - d. 2-Ethylbut-2-en-1-ol.
  - e. 2,4,6-Trinitrophenol.
  - f. tert-Butyl-isopropylether
- 2. **Hydration** of **1-methylcyclohexene** results in the formation of \_\_\_\_\_\_.
- 3. Predict the **product** of the following reaction.

- 4. Give the structures of the **major products** you would obtain from the reaction of **phenol** with the following **reagents**:
  - a. Br<sub>2</sub> (1 mol).
  - b. NaOH, then CH<sub>3</sub>I
  - c. Br<sub>2</sub> (3 mol).
  - d.  $Na_2Cr_2O_7/H_3O^+$

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- 5. What **products** would you obtain from the reaction of **1-methylcyclohexanol** with the following **reagents**:
  - a. HBr
  - b.  $H_2SO_4$
  - c. CrO<sub>3</sub>
  - d. Na, then CH<sub>3</sub>I

## 6. Identify the major **products** of the following reactions.

a.

b.

$$CrO_3$$
 $H_3O^{\oplus}$ 

C.

d.

e.

f.

g.

h.