1) Starting from benzene or toluene, show how you would synthesize each of the following:



## **Homework Set 6**

TUD Department of Chemistry Spring 2017 Page 2 of 4

$$G.$$

$$NH_2$$

$$NO_2$$

TUD Department of Chemistry Spring 2017 Page 3 of 4

- 2) Provide the structure of the semicarbazone that results from the reaction of semicarbazide and benzophenone.
- 3) Provide the structure of the ketal that results from the reaction of excess benzyl alcohol and acetophenone.

4) Provide the structure of the products that result when the molecules below are hydrolyzed in aqueous acid:

## **CHM 3343**

## Homework Set 6

TUD Department of Chemistry Spring 2017 Page 4 of 4

5) What is it?



