

CHEM 345

EXAM 3

11-15-2023

This exam will be scanned: Clearly write your name and student number below:

- **Use a pen or write darkly with a pencil so your answers will be visible when scanned.**
- **DO NOT REMOVE STAPLE.**

1. Draw the structure for the following compounds (9 points)

(1R,3R)-3-methylcyclohexanol

ethyl isopropyl ether

o-bromophenol

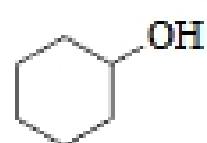
2. Draw the structure of *all possible alcohols* that could be used to make the following alkene using an elimination reaction and *circle the best* choice. (6 points)



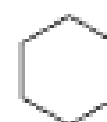
3. Predict the product from the following reaction and *circle the major product*. (6 points)



4. Show how you could convert **cyclohexanol** into **cyclohexane**. More than one step may be necessary. (6 points)



cyclohexanol



cyclohexane

5. Show how you could prepare **tert-butyl propyl ether** using a **S_N1** method. (6 points)



tert-butyl propyl ether

6. Draw the **mechanism** for the reaction shown below. (8 points)

