



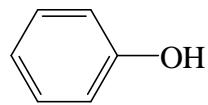
THE UNIVERSITY OF
SYDNEY

School of Chemistry

Chemistry 1B Advanced and SSP (CHEM1902/1904)

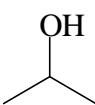
Answers to Problem Sheet 4

1. (a)



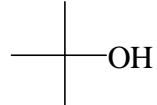
phenol

(b)



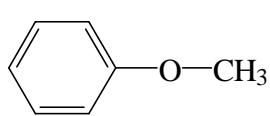
secondary alcohol

(c)



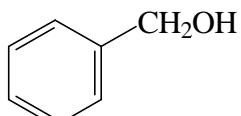
tertiary alcohol

(d)



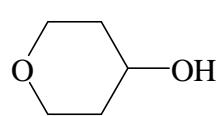
ether

(e)

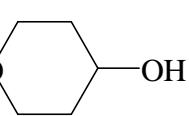


primary alcohol

(f)

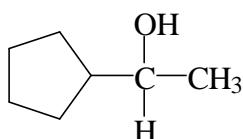


ether



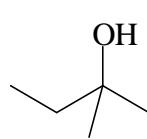
secondary alcohol

(g)



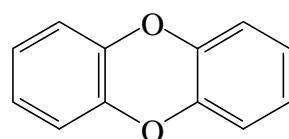
secondary alcohol

(h)



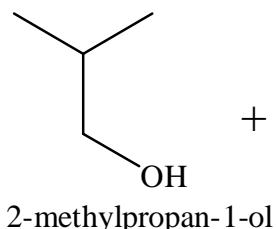
tertiary alcohol

(i)

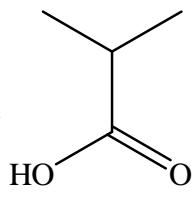


two ethers

2.

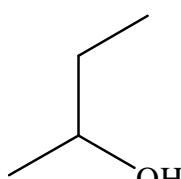


2-methylpropan-1-ol

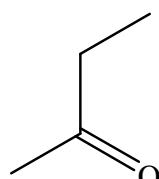
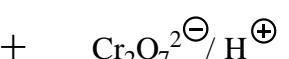


isobutyric acid

1° alcohol → carboxylic acid

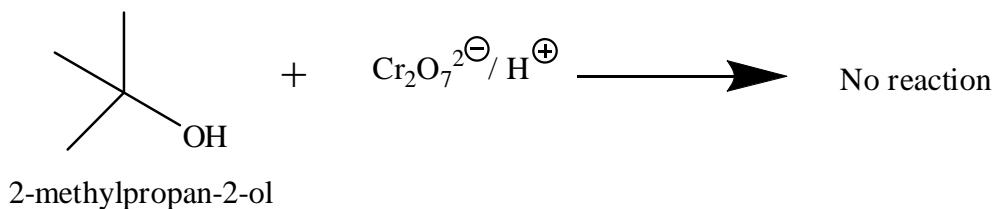


butan-2-ol

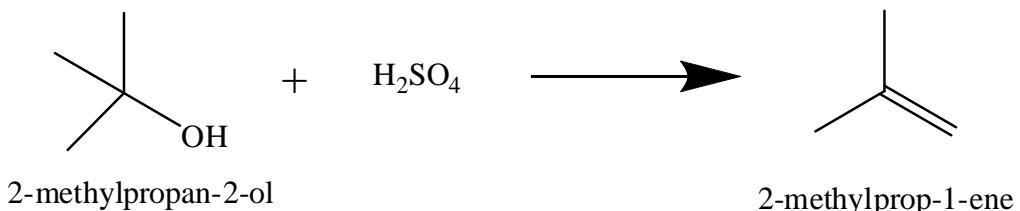


butan-2-one

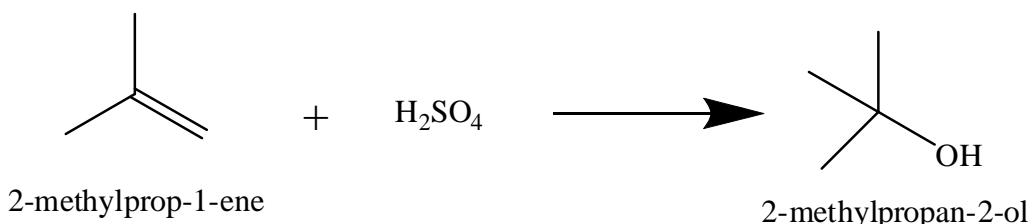
2° alcohol → ketone



3° alcohol – no reaction with oxidizing agent

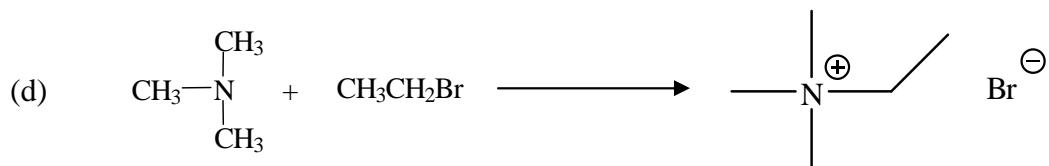
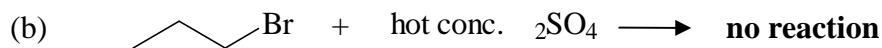
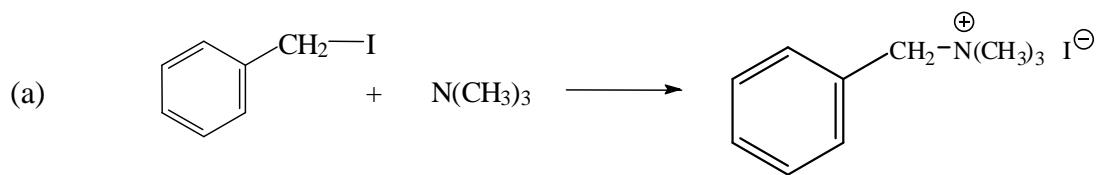


Dehydration of 3° alcohol



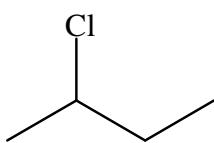
Hydration of a C=C bond

3.



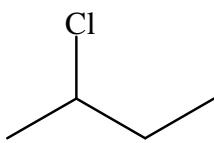
4.

(a)



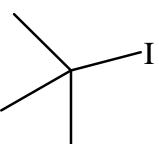
2-chlorobutane

(b)



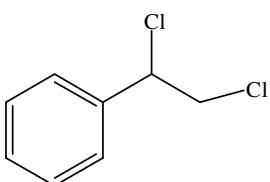
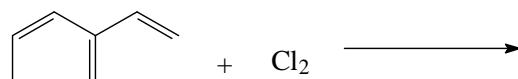
2-chlorobutane

(c)



2-iodo-2-methylpropane

(d)



(1,2-dichloroethyl)benzene

5.

(a)

