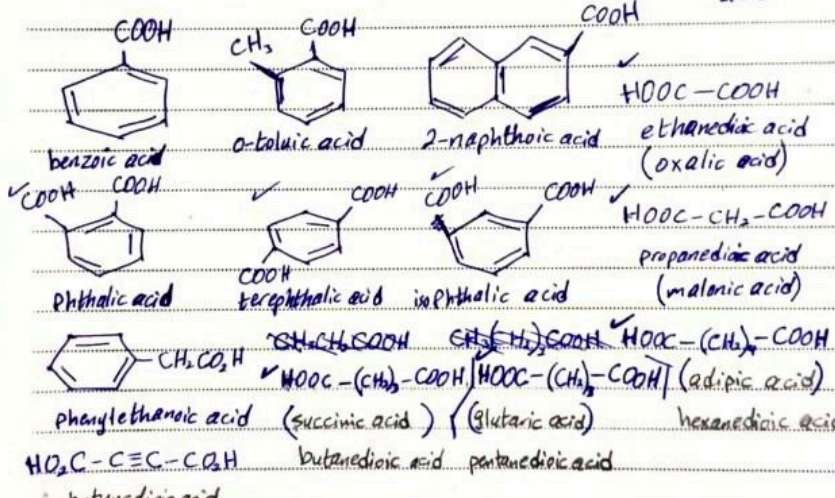
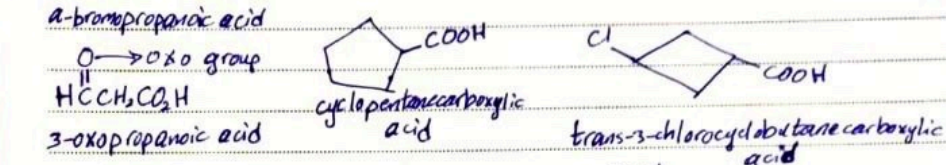
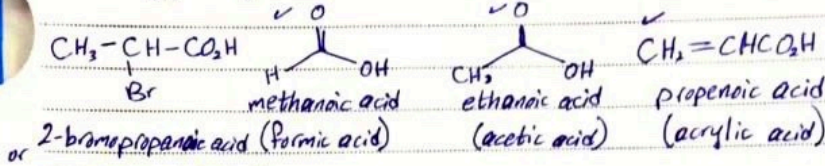
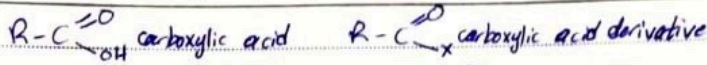
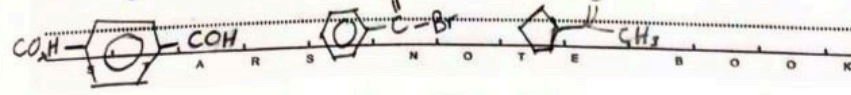
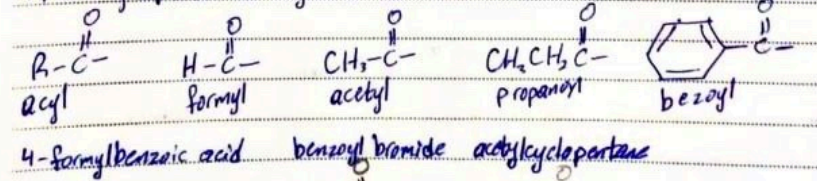


المادة 1. كيمياء عضوية 2017

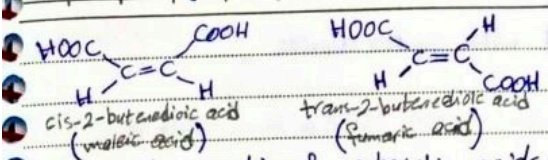
Subject: Carboxylic acids



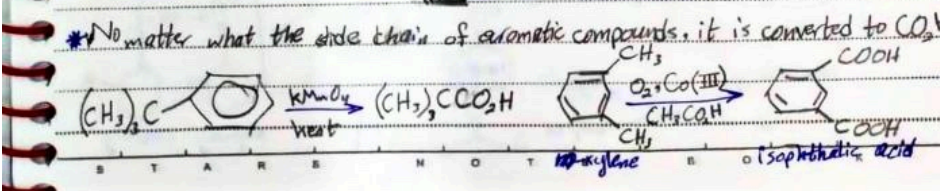
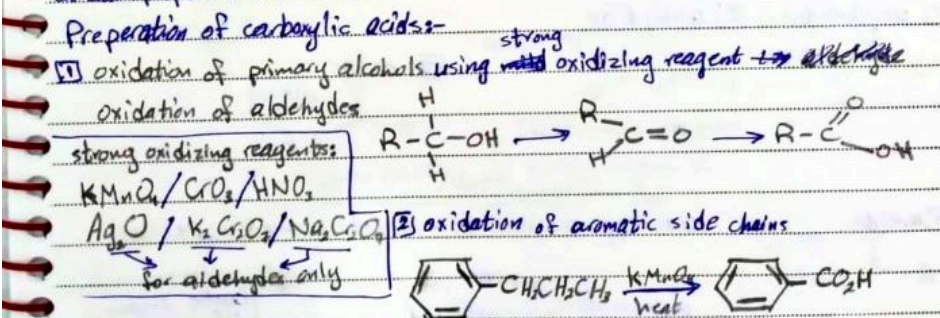
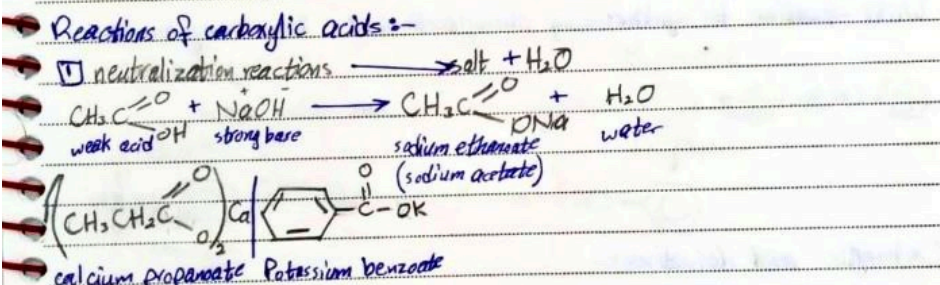
special groups of carboxylic acid:-



Subject: Carboxylic acids



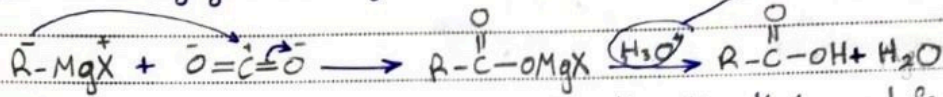
- Physical properties of carboxylic acids:-
- 1) have higher boiling points than alcohols, as they form 2 H-bonds between each 2 carboxylic acid molecules.
 - 2) solubility of carboxylic acids in water is similar to alcohol solubility.
 - 3) carboxylic acids are the most common acids in organic compounds. (weak acids)
- تأثير المجموعات السامية والارضية على خصائص الكربوكسيلية في المركبات العضوية على خصائص الكحوليات.



الموضوع: الأحماض الكربوكسيلية
 من هيدروكربونات
 من هيدروكربونات

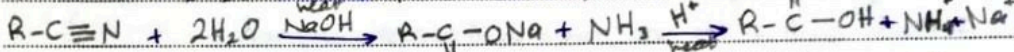
Subject: Carboxylic acids

3) reaction of grignard reagent with carbon dioxide



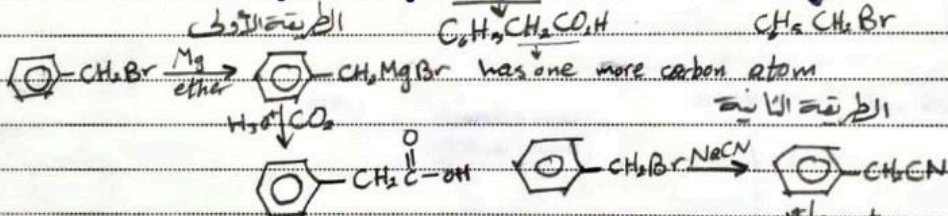
* the obtained acid has one more carbon atom than the alkyl or aryl from the grignard reagent.

4) Hydrolysis of cyanides $\rightarrow R-C \equiv N$



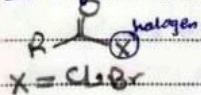
* The obtained acid has one more carbon atom than the alkyl or aryl from the cyanide

Write equations for synthesizing phenylacetic acid from benzyl bromide:

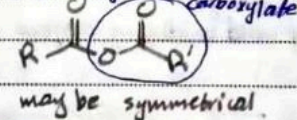


Carboxylic acid derivatives:-

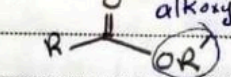
1) acyl halides



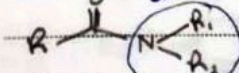
2) anhydride



3) ester

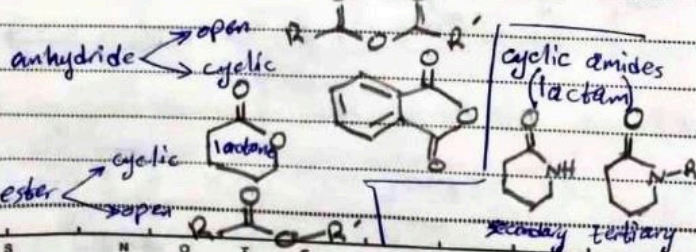


4) amide



may be primary
secondary
tertiary

activity: acyl halide > anhydride > ester > amide



S T A R S N O T E B O O K