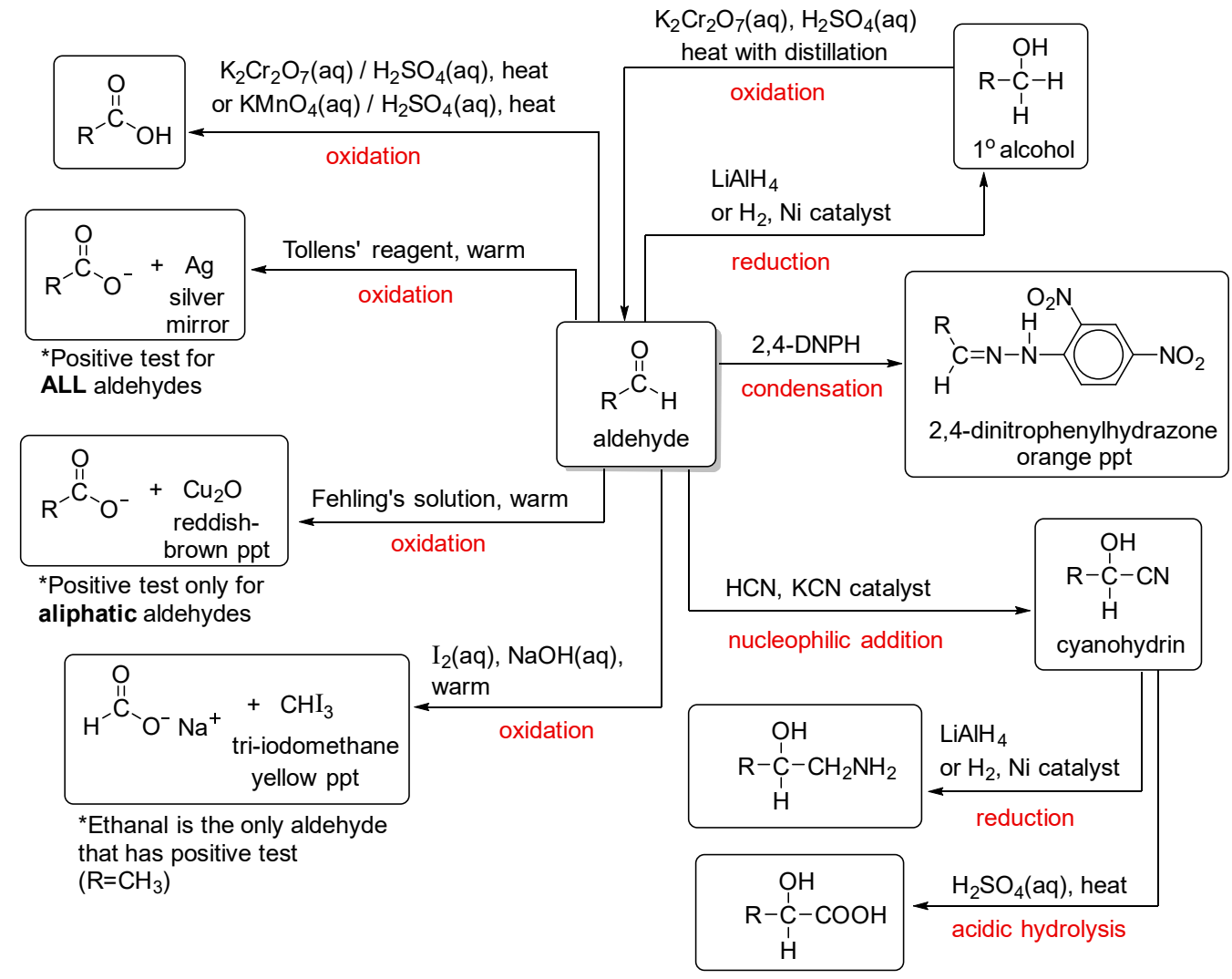
RAFFLES INSTITUTION
YEAR 6 H2 CHEMISTRY 2026
Tutorial 18 Carbonyl Compounds

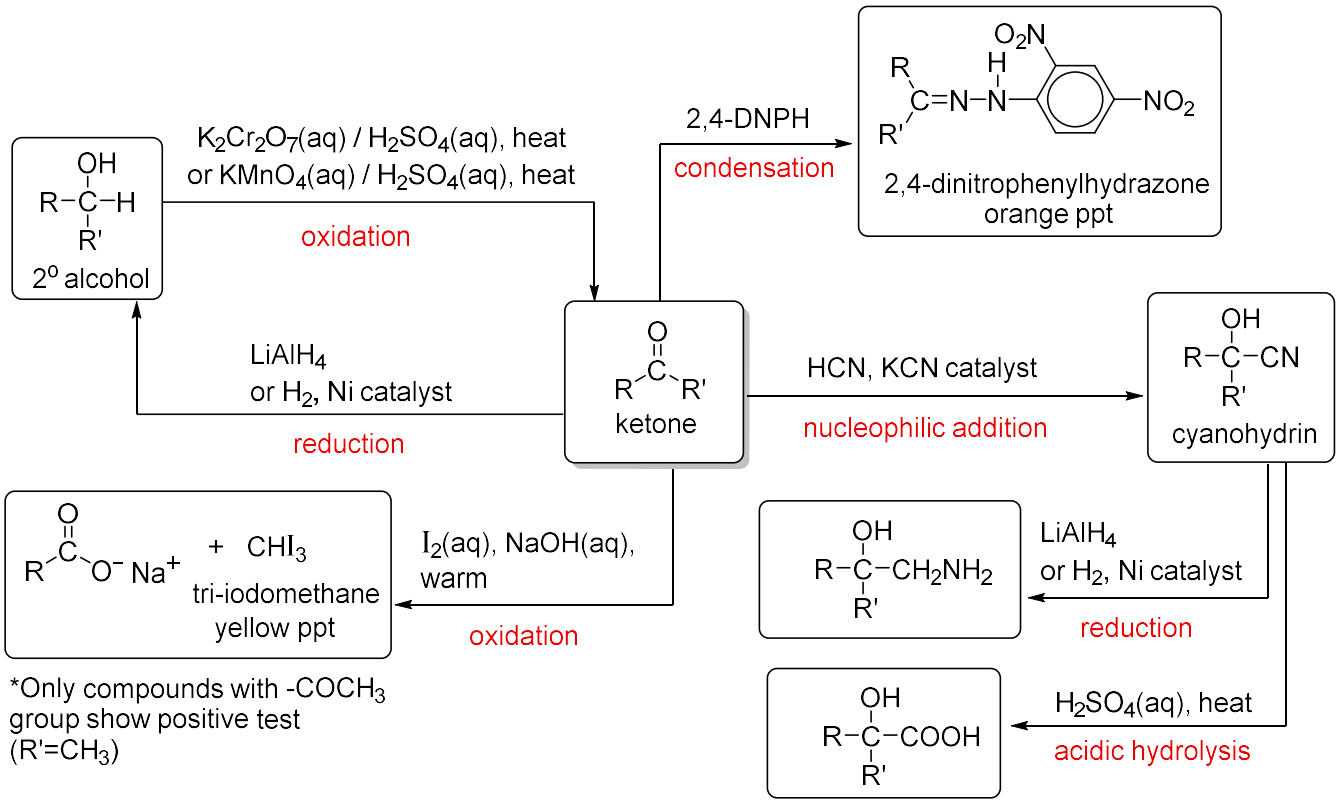
Reaction Mindmaps

❑ Aldehydes



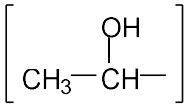
Note: Alcohols with $CH_3-CH(OH)-$ also give yellow ppt of CHI_3 when warmed with I_2(aq) and NaOH(aq)

❑ Ketones



*Only compounds with $-COCH_3$ group show positive test ($R'=CH_3$)

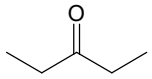
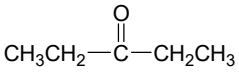
Notes:

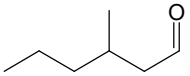
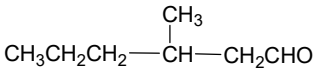
1) Alcohols with  also give yellow ppt of CHI_3 when warmed with I_2(aq) and NaOH(aq)

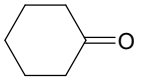
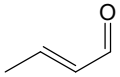
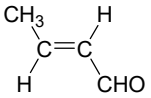
2) Aliphatic ketones generally do not undergo oxidation with Tollens' reagent, Fehling's solution, hot acidified $K_2Cr_2O_7$ and hot acidified $KMnO_4$.

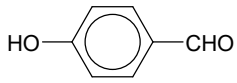
Answers to self-check questions

Q1

(a)  or 

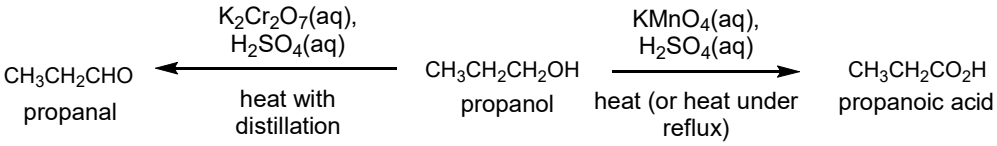
(b)  or 

(c)  (d)  or 

(e) 

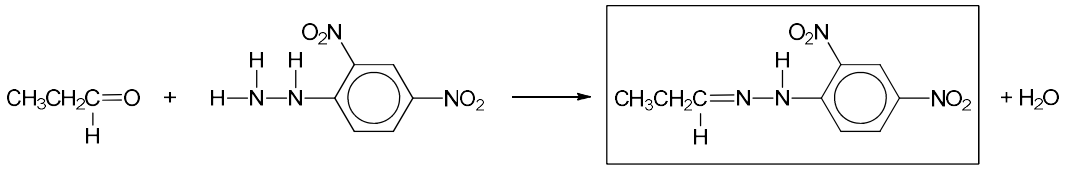
Q2(a) $LiAlH_4$ OR $H_2(g)$, Ni catalyst

Q2(b)



Heat propan-1-ol with acidified $K_2Cr_2O_7$ carefully with distillation of the product formed to collect mainly propanal as distillate.

Q2(c)



Observations: Orange ppt is formed.

Answers to MCQ: 3) B 4) C 5) B 6) D 7) B