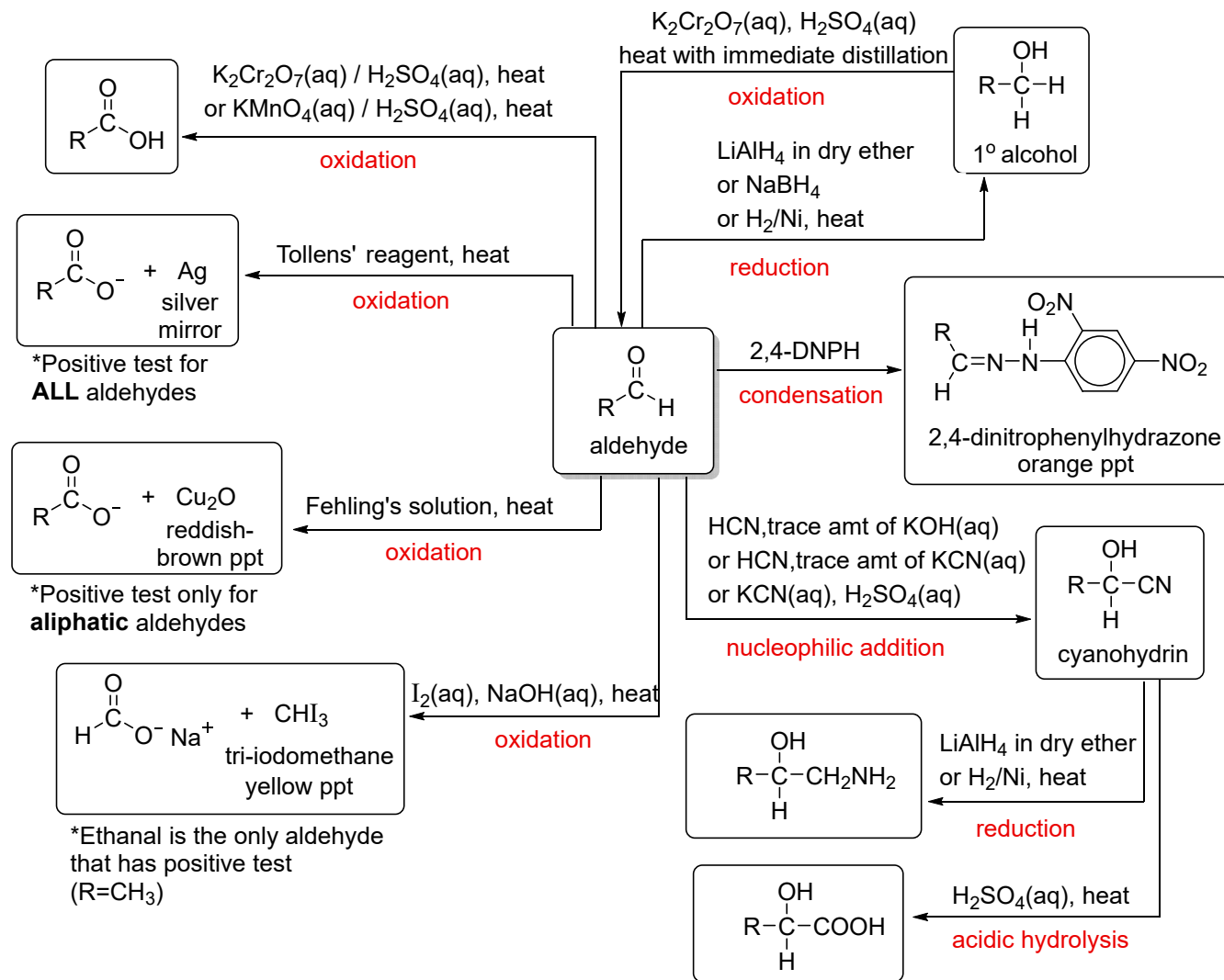




RAFFLES INSTITUTION
YEAR 6 H2 CHEMISTRY 2025
Tutorial 18 Carbonyl Compounds

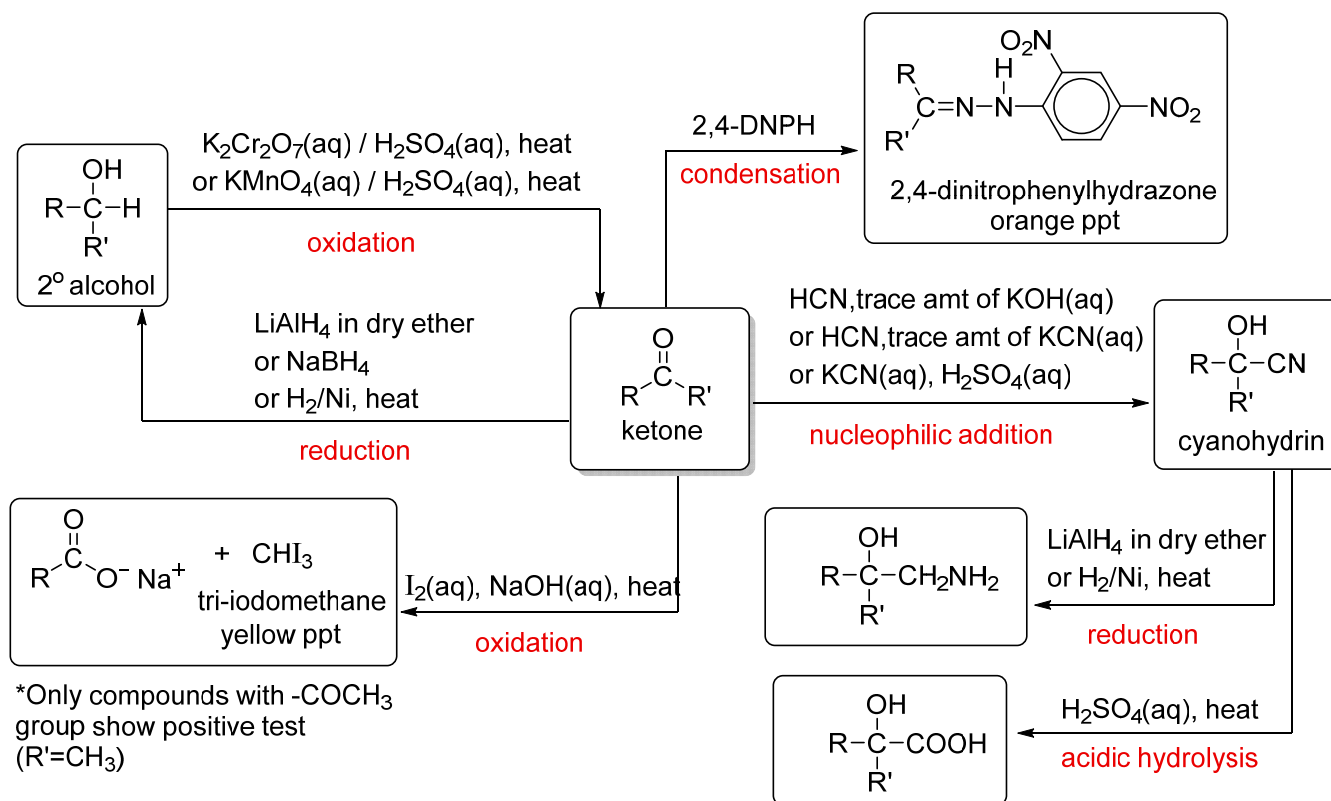
Reaction Mindmaps

☐ Aldehydes



Note: Alcohols with $\begin{bmatrix} OH \\ | \\ CH_3-CH- \end{bmatrix}$ also give yellow ppt of CHI_3 when heated with $I_2(aq)$ and $NaOH(aq)$

☐ Ketones



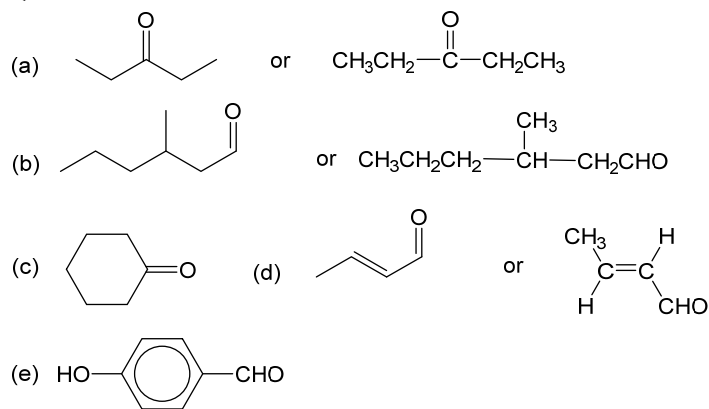
Notes:

1) Alcohols with $\left[\begin{array}{c} \text{OH} \\ | \\ \text{CH}_3-\text{CH}- \end{array} \right]$ also give yellow ppt of CHI_3 when heated with $\text{I}_2(\text{aq})$ and $\text{NaOH}(\text{aq})$

2) Aliphatic ketones generally do not undergo oxidation with Tollens' reagent, Fehling's solution, hot acidified $\text{K}_2\text{Cr}_2\text{O}_7$ and hot acidified KMnO_4 .

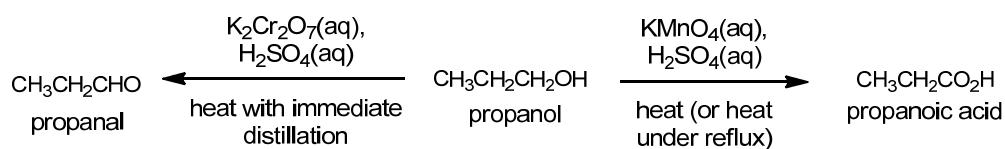
Answers to self-check questions

Q1



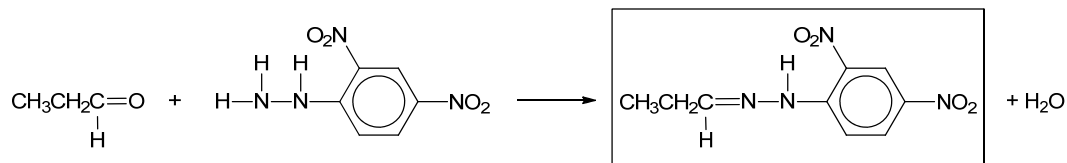
Q2(a) LiAlH₄ in dry ether, room temperature OR H₂(g), Ni(s), heat OR NaBH₄, room temperature

Q2(b)



Heat propan-1-ol with acidified K₂Cr₂O₇ carefully with immediate 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