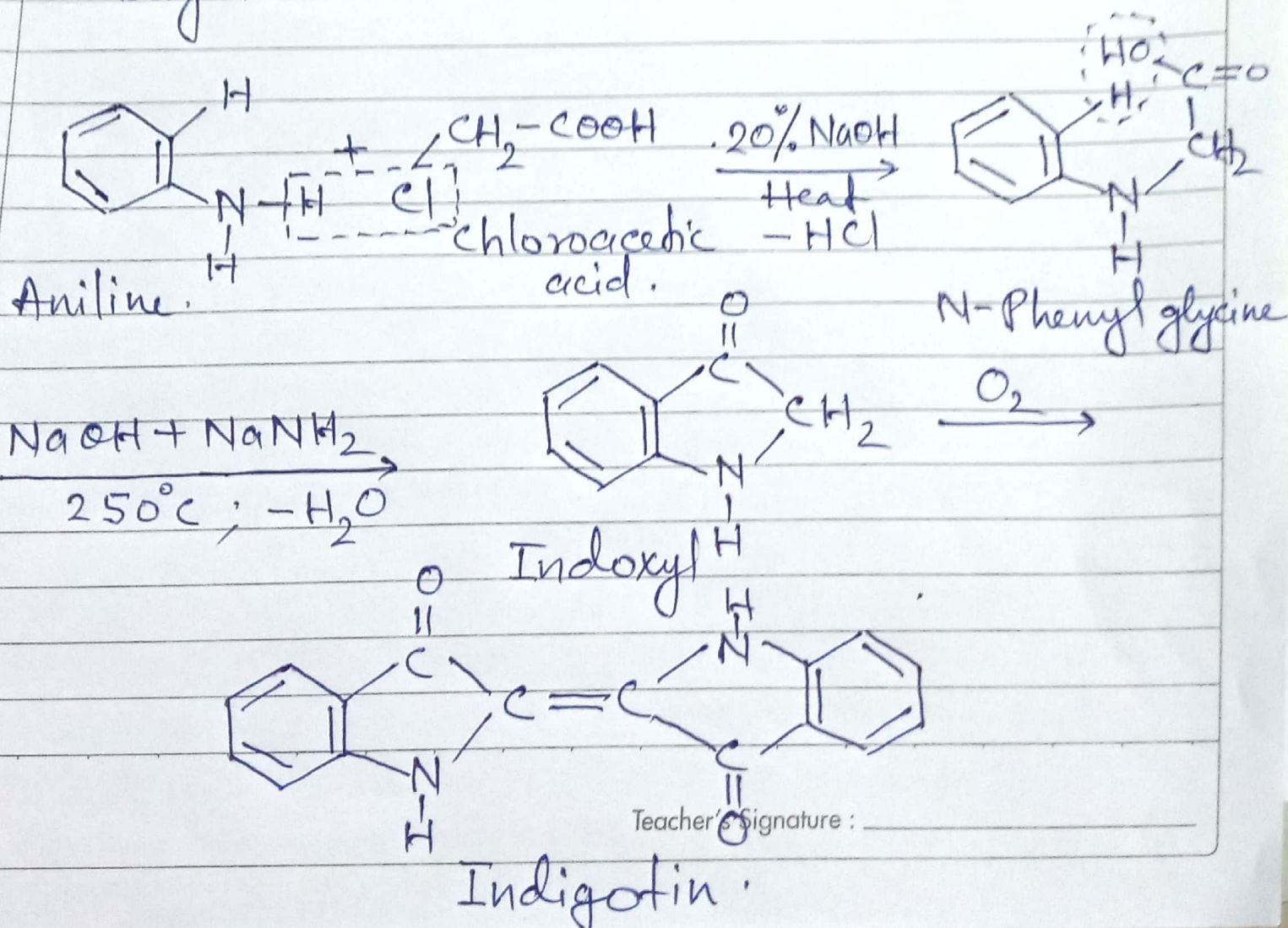


⑧ Chemistry and synthesis of Indigo dye

It is one of the most important and oldest dye. India is considered to be birth place of this dye. It is naturally isolated from leaves and branches of Indigo plant (*Indigofera tinctoria*)

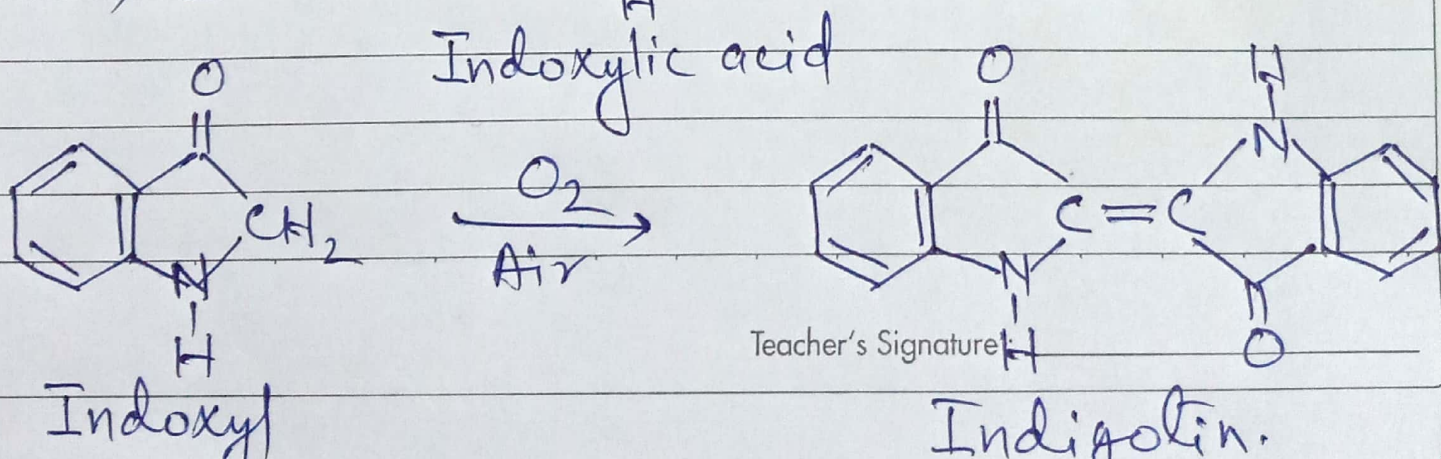
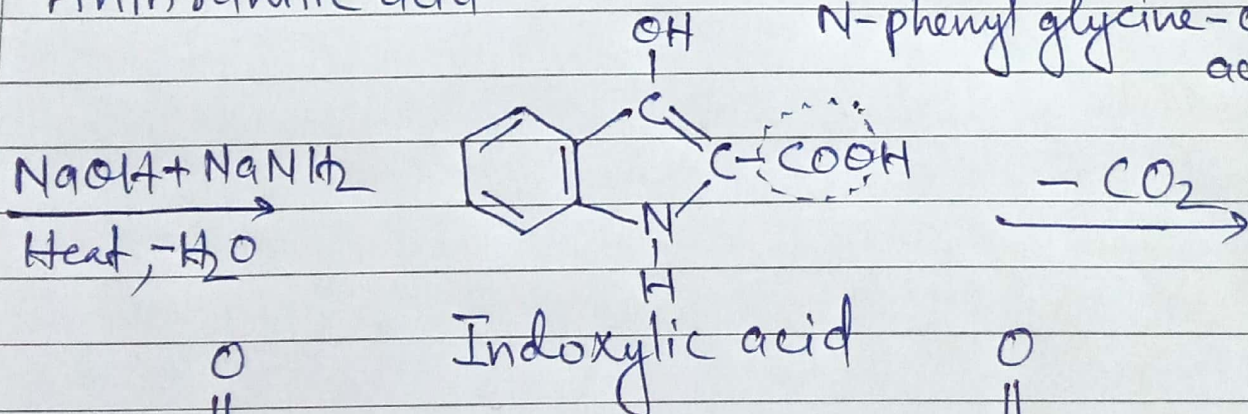
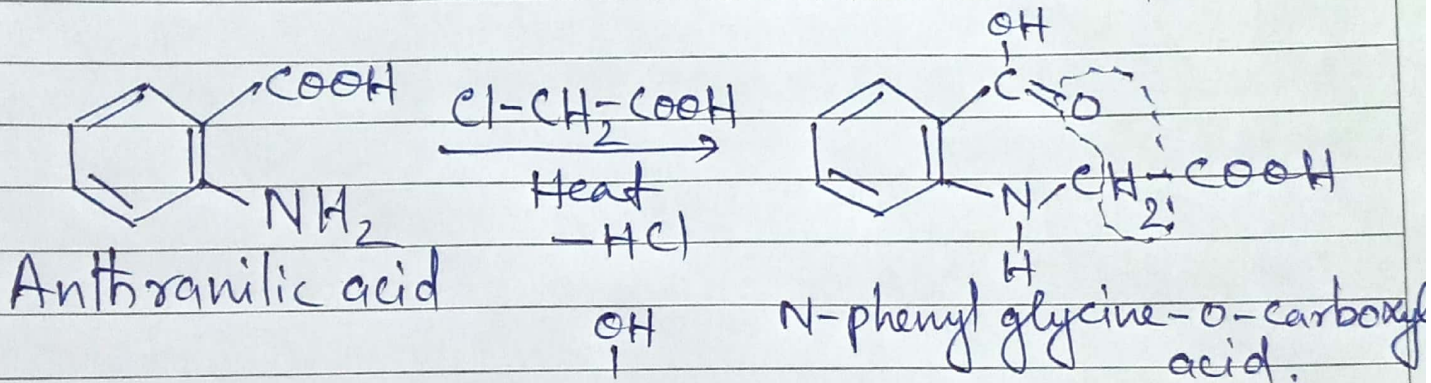
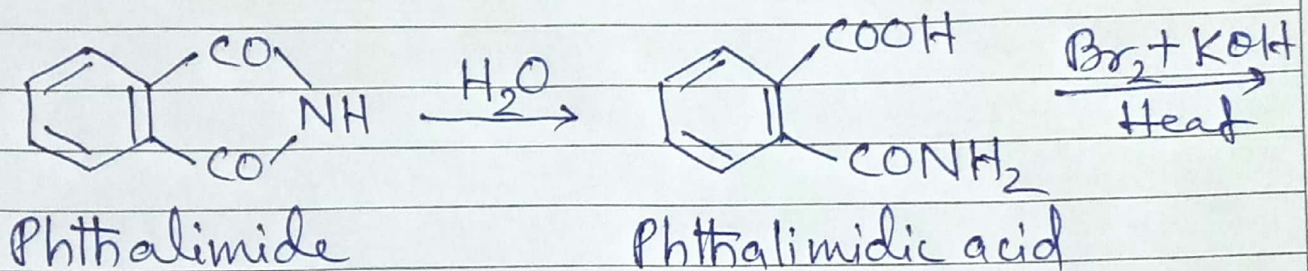
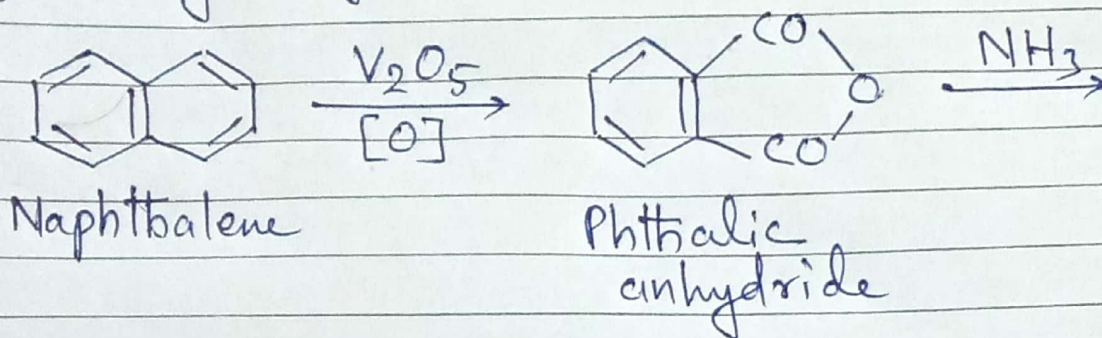
First Humann synthesis

In this method it is obtained from aniline by condensation with chloroacetic acid followed by fusion of the condensation product with NaOH and NaNH₂ give indoxyl. Aerial oxidation of indoxyl gives indigotin.



Heumann 2nd synthesis (Commercial method)

Commercially indigo is synthesised from naphthalene or anthranilic acid in which following steps are involved.



Teacher's Signature

Uses :

- 1) Indigo is extensively used for dyeing cotton by applying vatting process. The quality of colour is excellent and is stable to the action of soap and light.
- 2) It is also used in printing ink.