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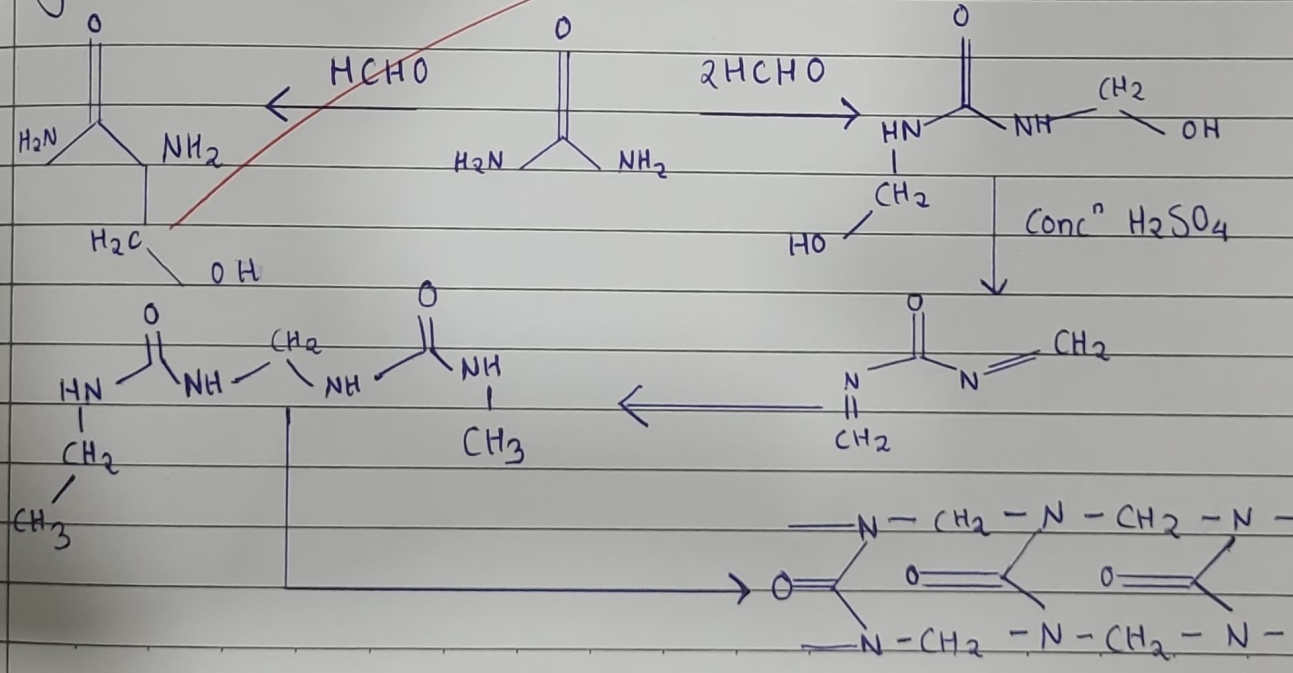
Experiment - 1

* Synthesis of Urea formaldehyde resin

→ Principle:- Amino resins are obtained by condensation reaction of urea or melamine with formaldehyde. Such resins find uses in packaging, water tumblers unbreakable dishes, buttons etc. They are also used in paper industry to improve strength of paper

⇒ It is formed by condensation reaction. Urea & formaldehyde are mixed to form the precursor molecule & concentrated H_2SO_4 is added to remove water & Grow a 3-D network structure. Reaction is given below



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→ Reagents :- Formaldehyde (40%), urea, conc^n H_2SO_4, distilled water.

→ Apparatus :- 100 ml beaker, measuring cylinder, glass rod, watch glass, funnel, filter paper.

→ Observations :-

- Weight of empty watch glass = w_1 = 32.63 g
- Weight of watch glass ω product = w_2 = 33.91 g
- Weight of product = $(w_2 - w_1)$ = 1.28 g

Result ?

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