ONLINE CLASS

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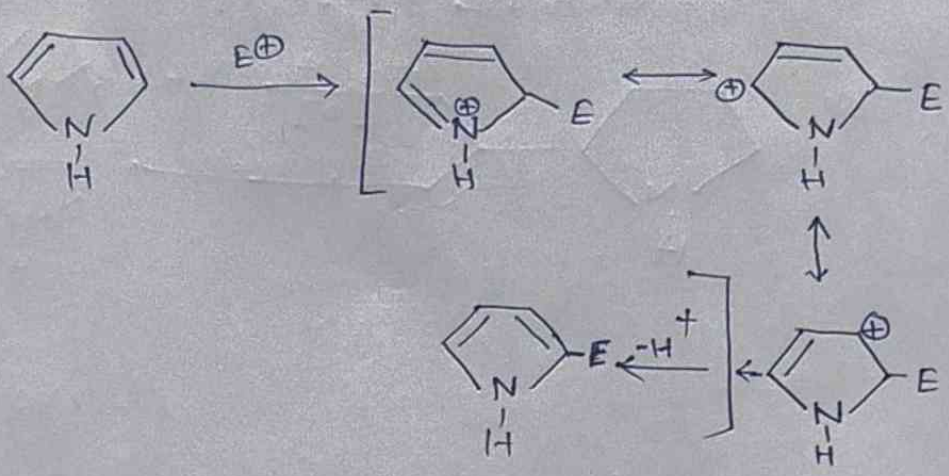
Sub:- Chemistry Sem V MIC-9 BY DR. M.KR

Reaction and reactivity of Pyrrole

(1) Pyrroles generally reacts with electrophiles at the α-Position (C_2 or C_5), due to the highest degree of stability of the Protonated intermediate.



(2) Halogen generally provides Polyhalogenated Pyrrole, but monohalogenation can be performed AS a typical for electrophillic additions to Pyrroles. halogenation generally occurs at the 2-positions but can also occurs at the 3 Position by ~~sitation~~ silation on the nitrogen.

Pyrrole $\xrightarrow[AlCl_3]{Cl_2}$ 2 chloropyrrole +, 3chloropyrrole

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(3) ~~Friedal~~

Friedal craft acylation :- Pyrrole is reacted with acyl grop in the presence of $AlCl_3$ and gives two product one is major and another is minor product.

Pyrrole $\xrightarrow[AlCl_3]{CH_3COCl}$ 2-ethylPyrrole + 3-ethyl Pyrrole.

(4) Oxidation and Reduction :-

Pyrrole is oxidized to maleinimide and on reduction gives pyrrolidine.

eg.