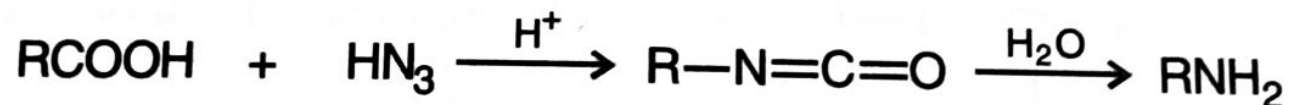


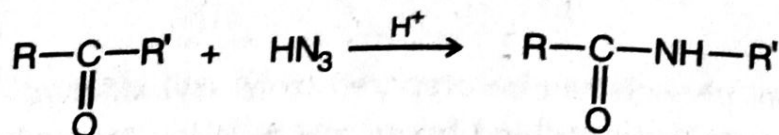
## SCHMIDT REACTION

This reaction involves addition of hydrazoic acid to carboxylic acids, aldehydes and ketones, alcohols and olefins. Most common is the reaction with carboxylic acids.

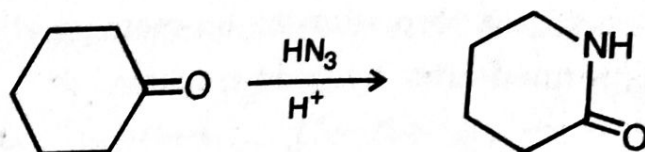


Various catalysts like sulphuric acid and Lewis acids are used. When R is aliphatic then good yields are obtained but when R is aryl group the steric factors will decide the product.

If reaction occurs between a ketone and a hydrazoic acid, then it helps in the introduction of -NH between the carbonyl group and one 'R' group. Ketone gets converted into an amide.



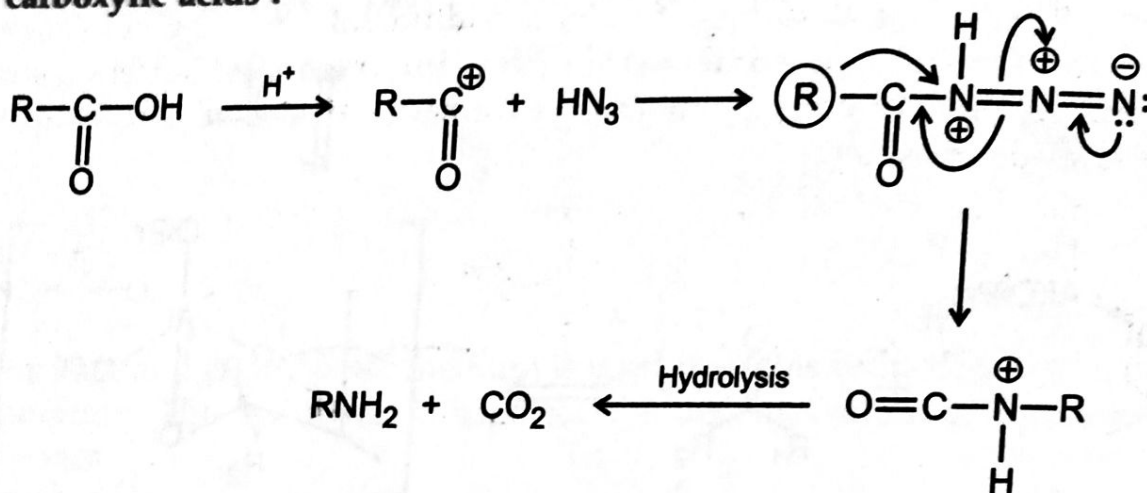
R may be alkyl or aryl. Generally, dialkylketones and cyclic ketones reacts more rapidly than alkyl aryl ketones. Cyclic ketones gives lactams



Alcohols and olefines reacts with hydrazoic acid to give alkyl azides.

### Mechanism

#### 1) With carboxylic acids :



#### 2) With ketones

