

IMPORTANT QUESTIONS 1.

FOR DEGREE-I HONS.

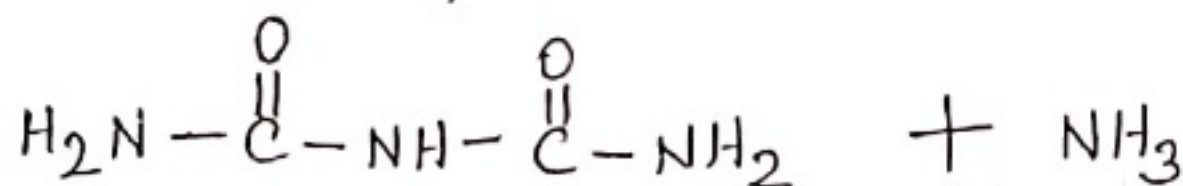
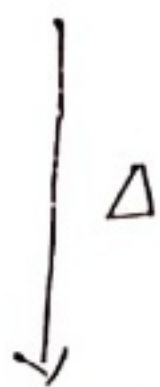
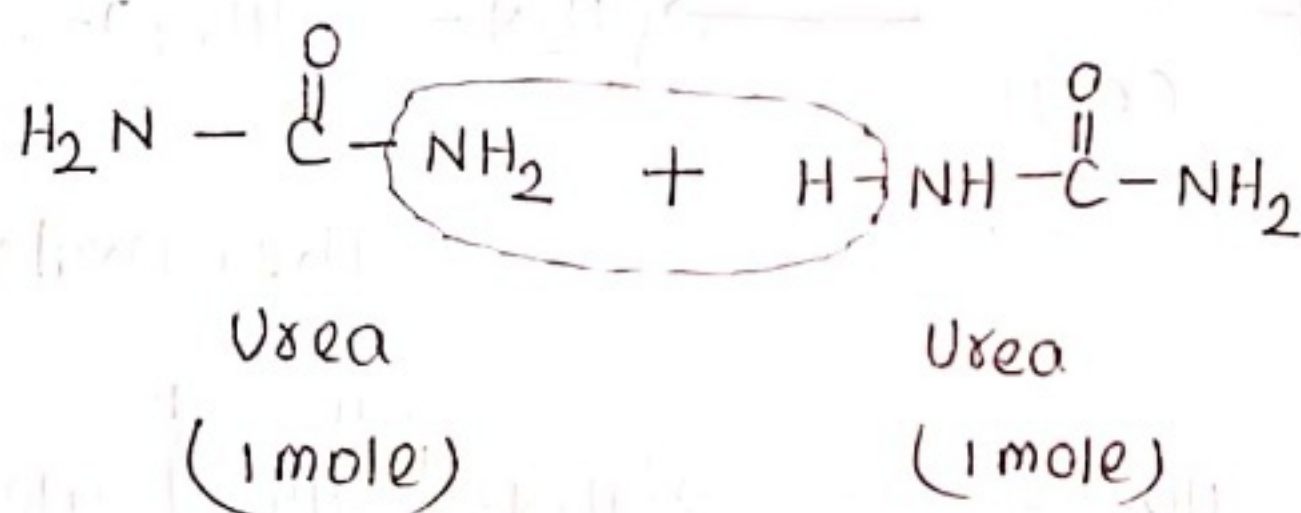
SOME IMPORTANT REACTIONS

OF UREA

09/10/2020

1. ACTION OF Heat (Biuret Test)

When urea is heated to a temperature above its melting point (132°C), ammonia is evolved and crystalline biuret is formed.



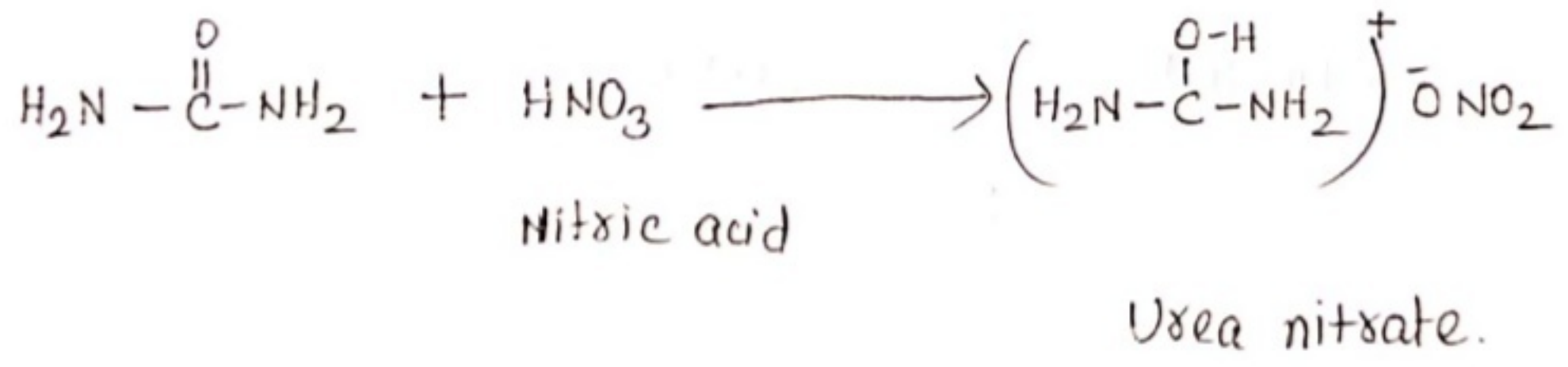
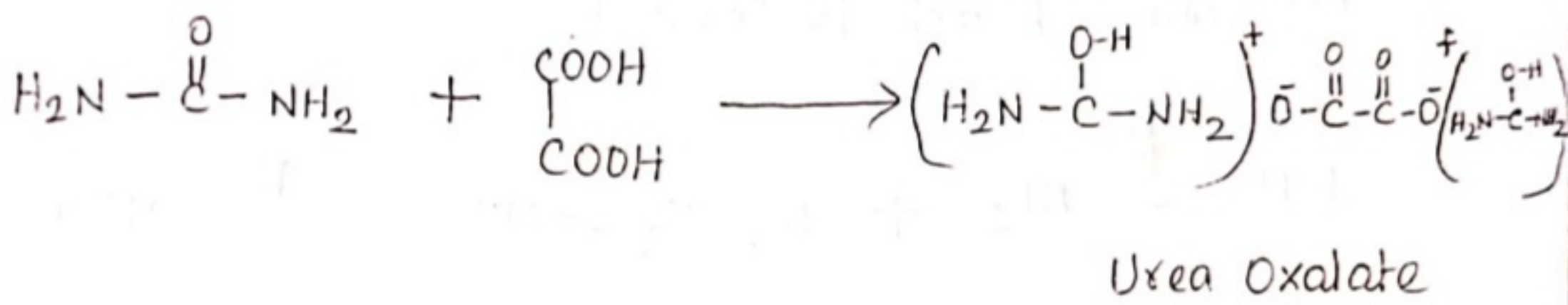
Biuret

If an alkaline solution of biuret is treated with a drop of copper (II) sulphate solution, a violet

colour appears. This serves as a Test (Biuret Test) for the urea, and also for proteins, peptides and other compounds containing the -CO-NH-linkage.

2. Salt formation:

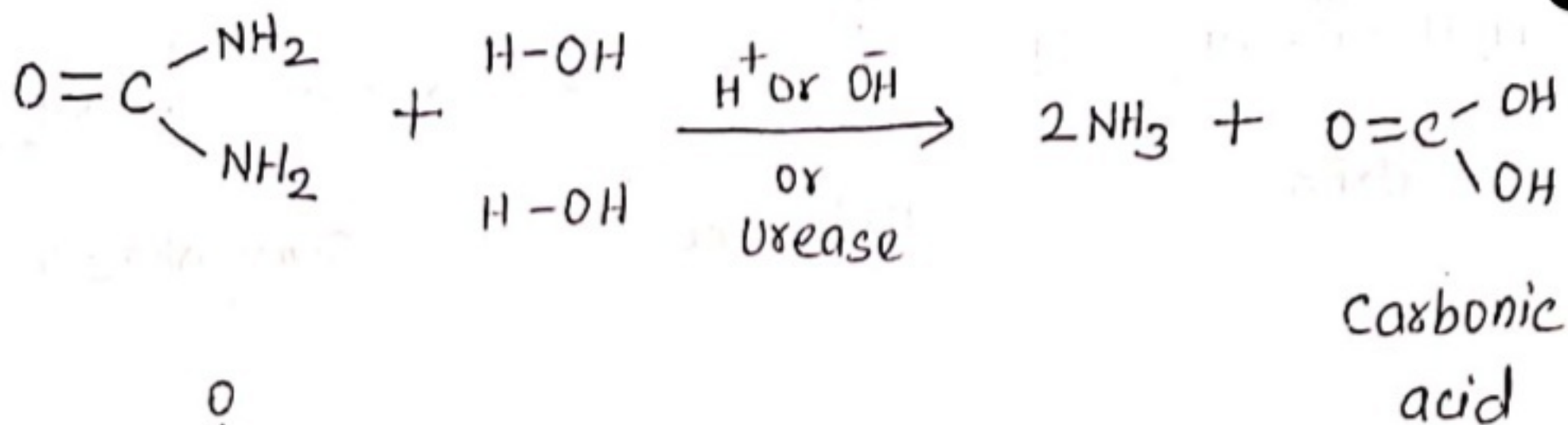
It forms stable, water-insoluble salts with HNO₃ (Nitric acid) and Oxalic acid. With nitric acid it forms urea nitrate and with oxalic acid it forms Urea oxalate.



3. Hydrolysis :-

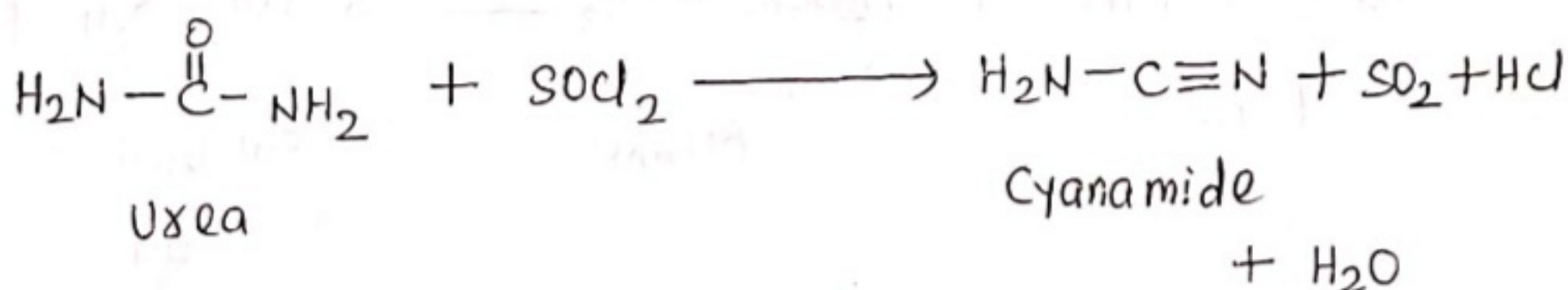
On heating with dilute acids or dilute alkali, urea is hydrolysed to give carbon dioxide and ammonia.

Hydrolysis can also be brought about by the enzyme urease.

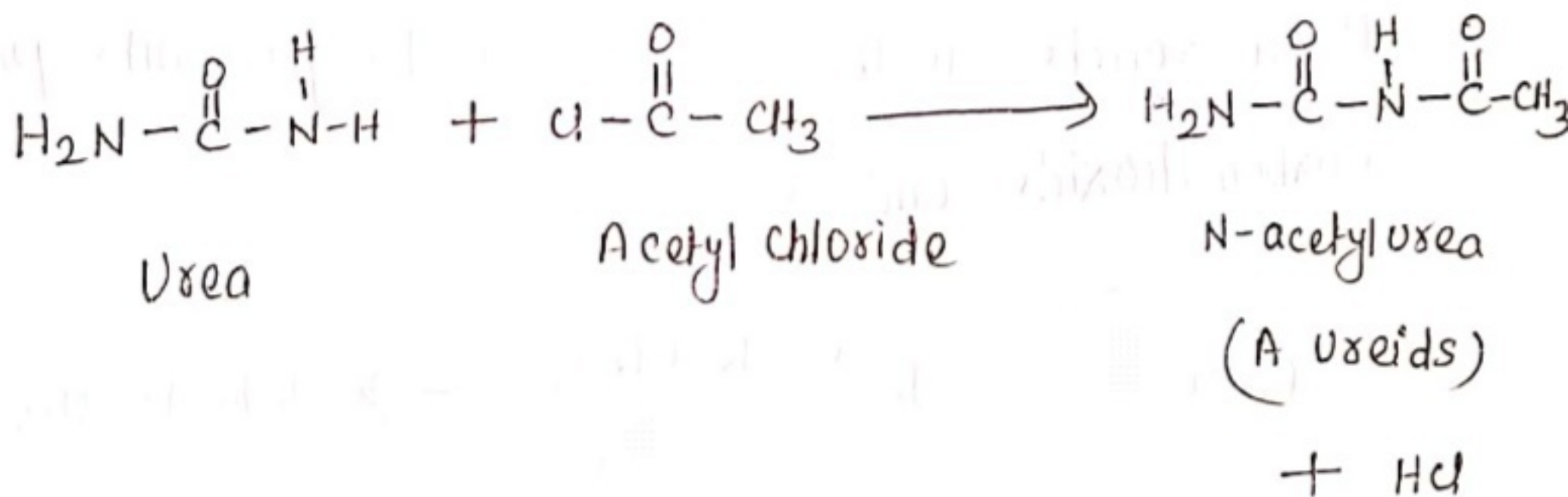


Carbonic acid

4. Reaction with Thionyl chloride:-



5. Reaction with Acid chloride:-



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