

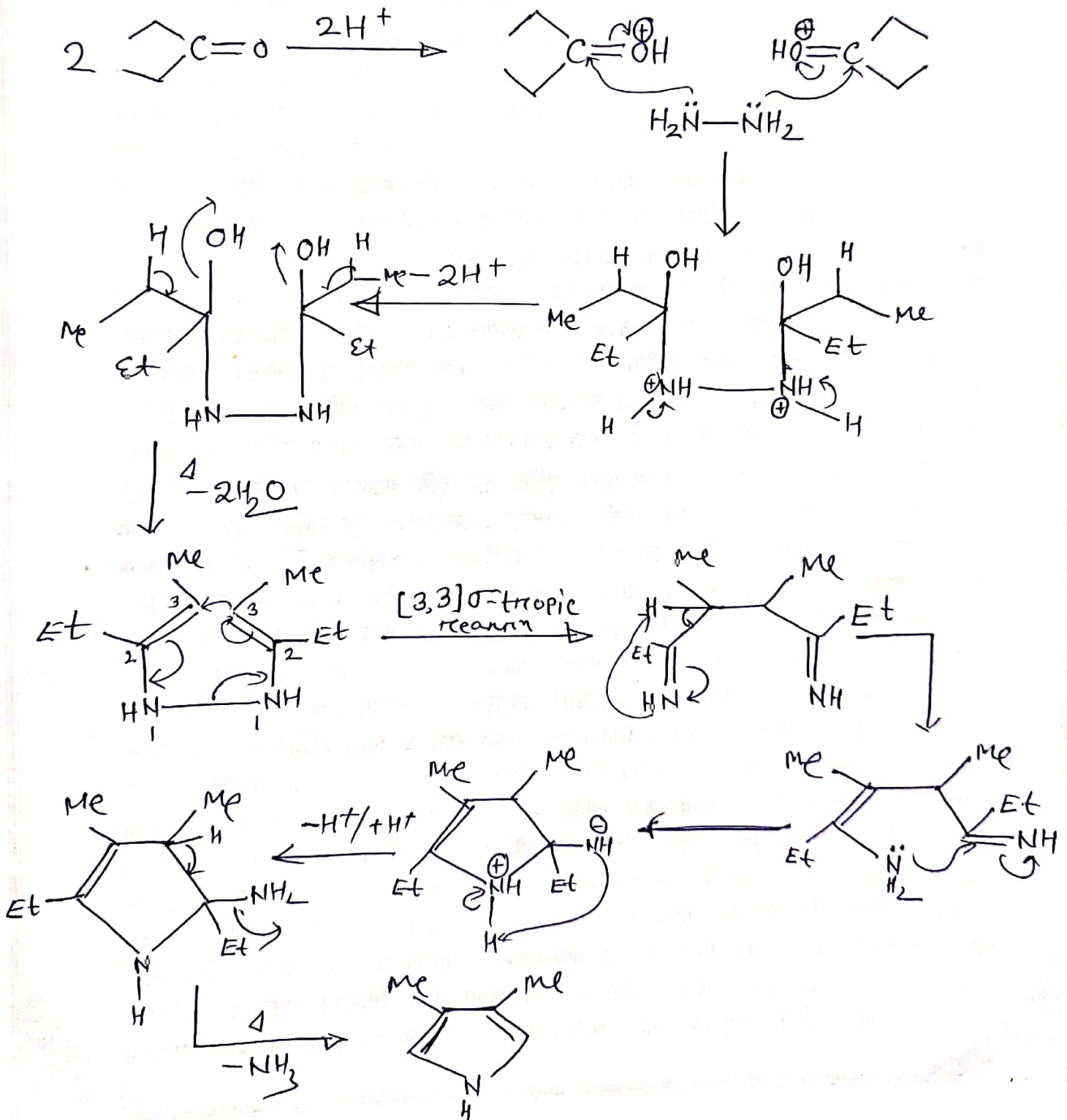
①

# 3rd Year Honours

## Different Universities solved Problems

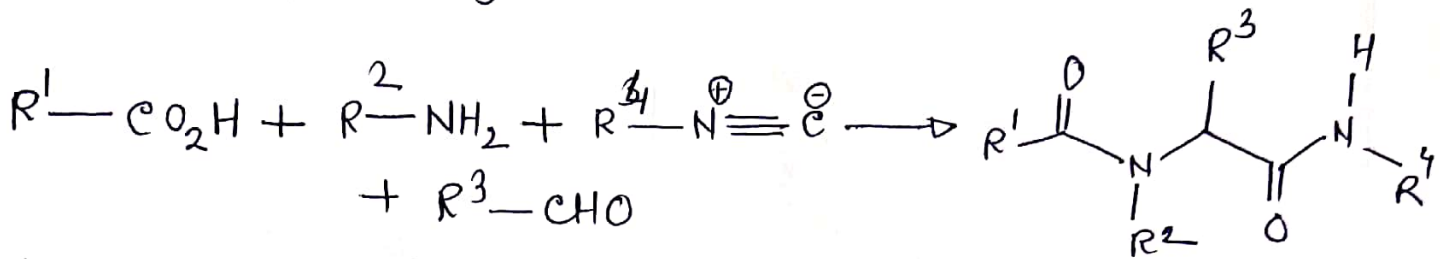
### (Organic)

- \* 1). Synthesis Pyrole derivative from two eqv. of Pentanone and hydrazine under strongly acidic condition.

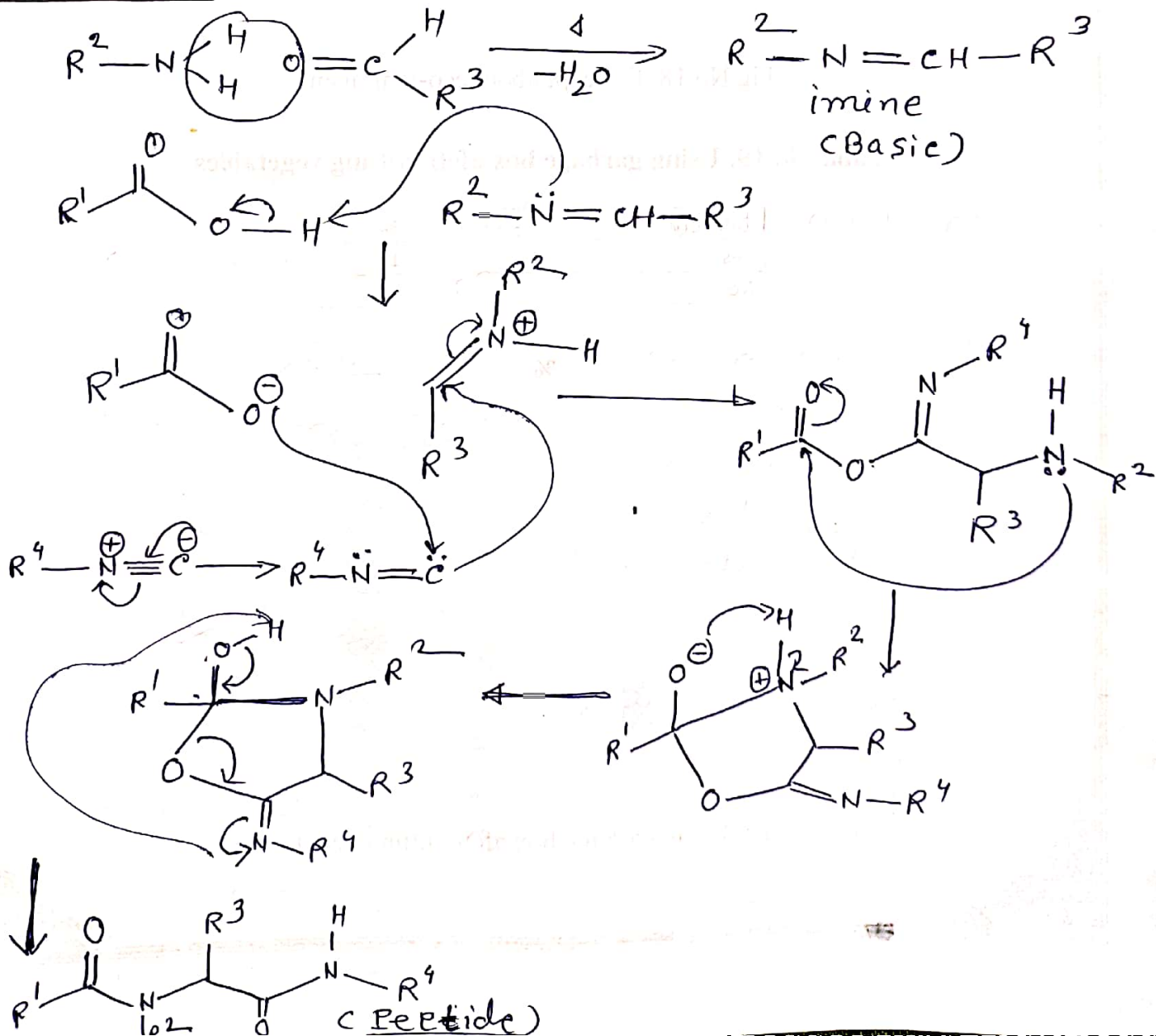


2. How peptide can be synthesized from Ugi reaction?

Ugi reaction is a <sup>four</sup> component coupling reaction among aldehyde, carboxylic acid, 1° amine and alkyl isocyanide.

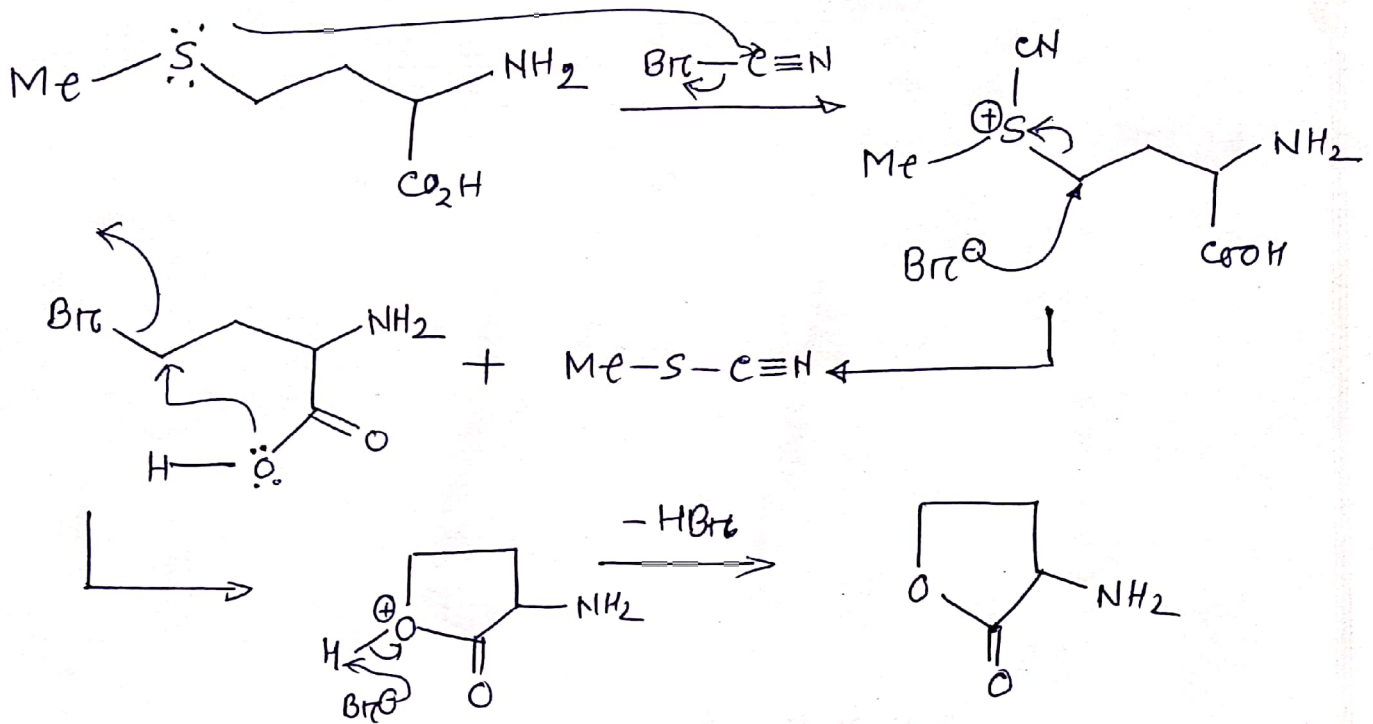


Mechanism:

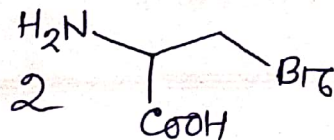
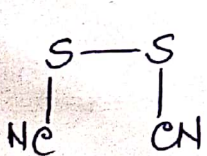
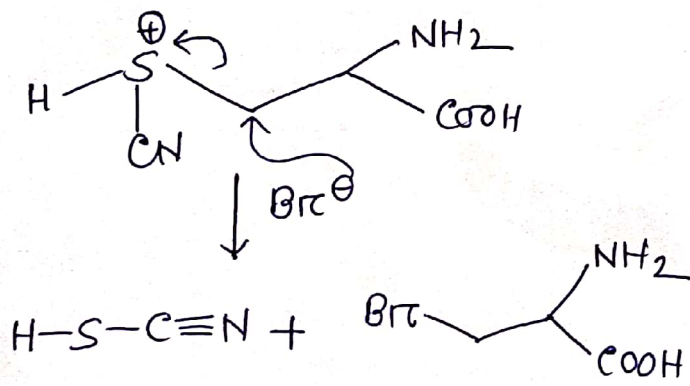
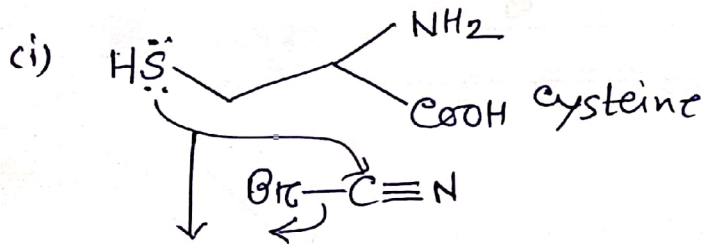


③

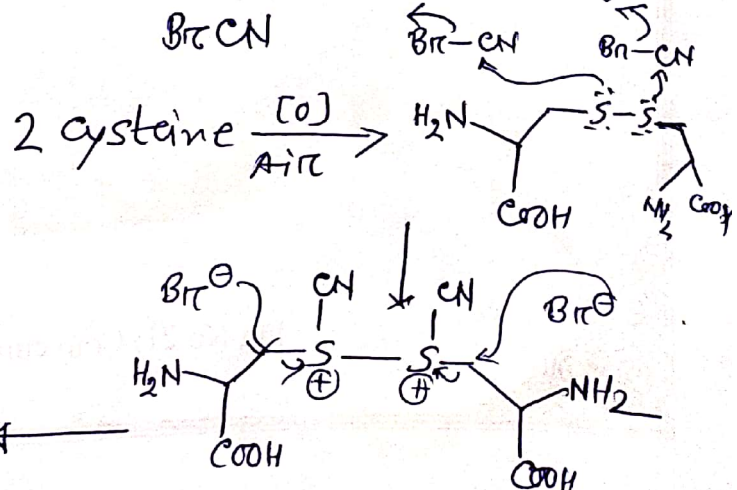
③ what happens when methionine is treated with cyanogen bromide.



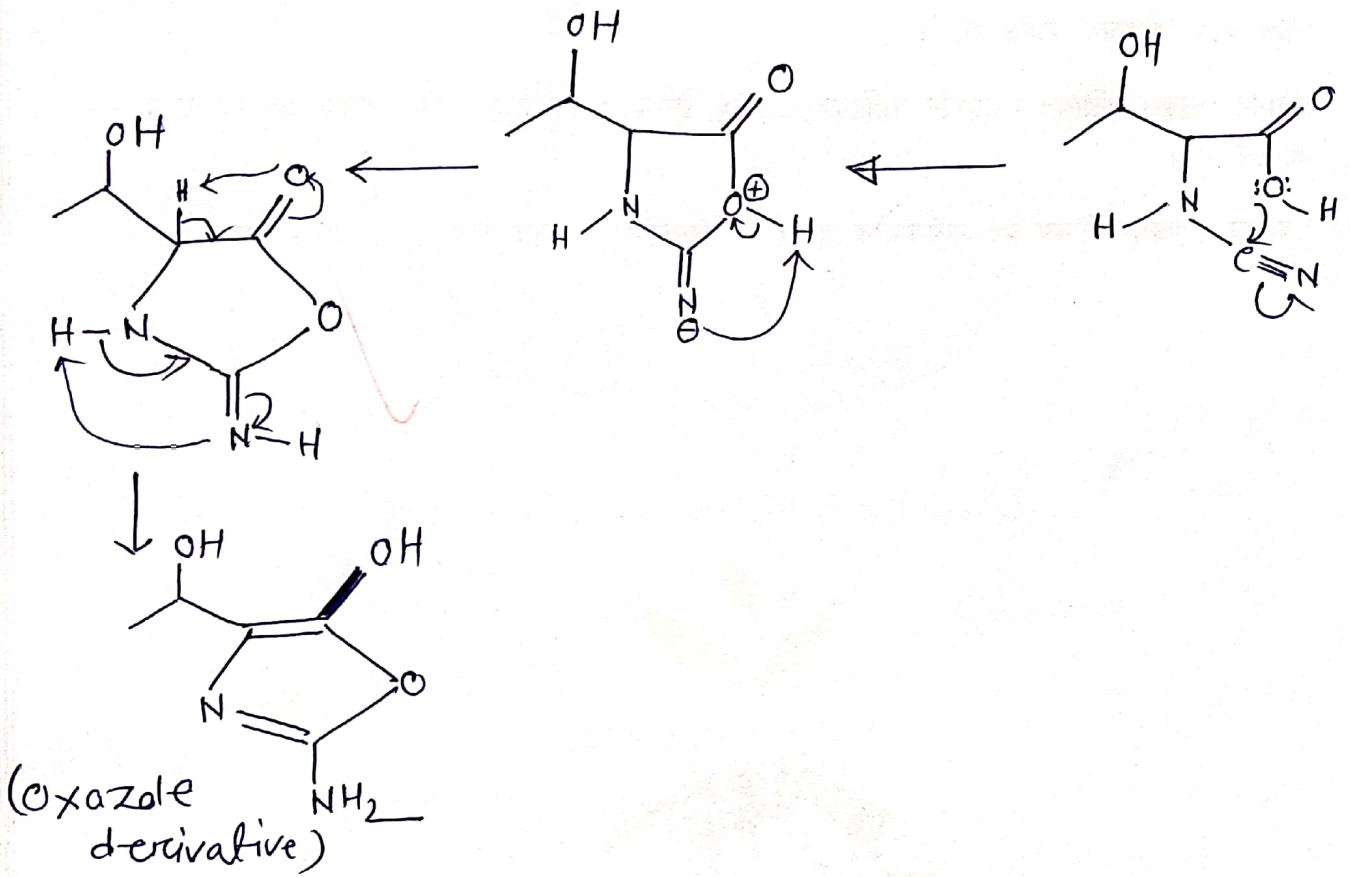
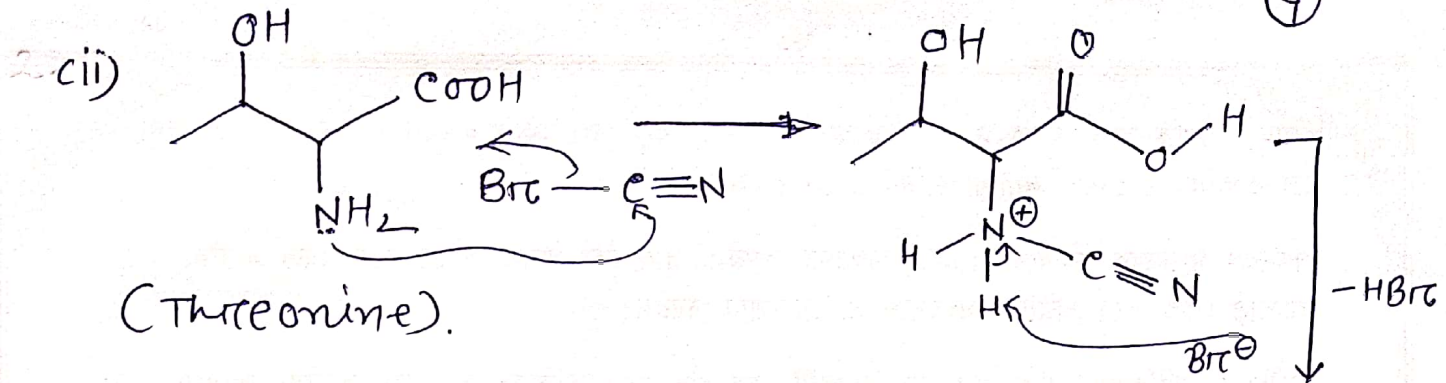
④ what happens when (i) cysteine is subjected to  $BrCN$ . (ii) threonine is subjected to  $BrCN$



Some cysteine undergo oxidative dimerization to cystine, which is also attacked by  $BrCN$



4



4. Predict the Product with mechanism.

