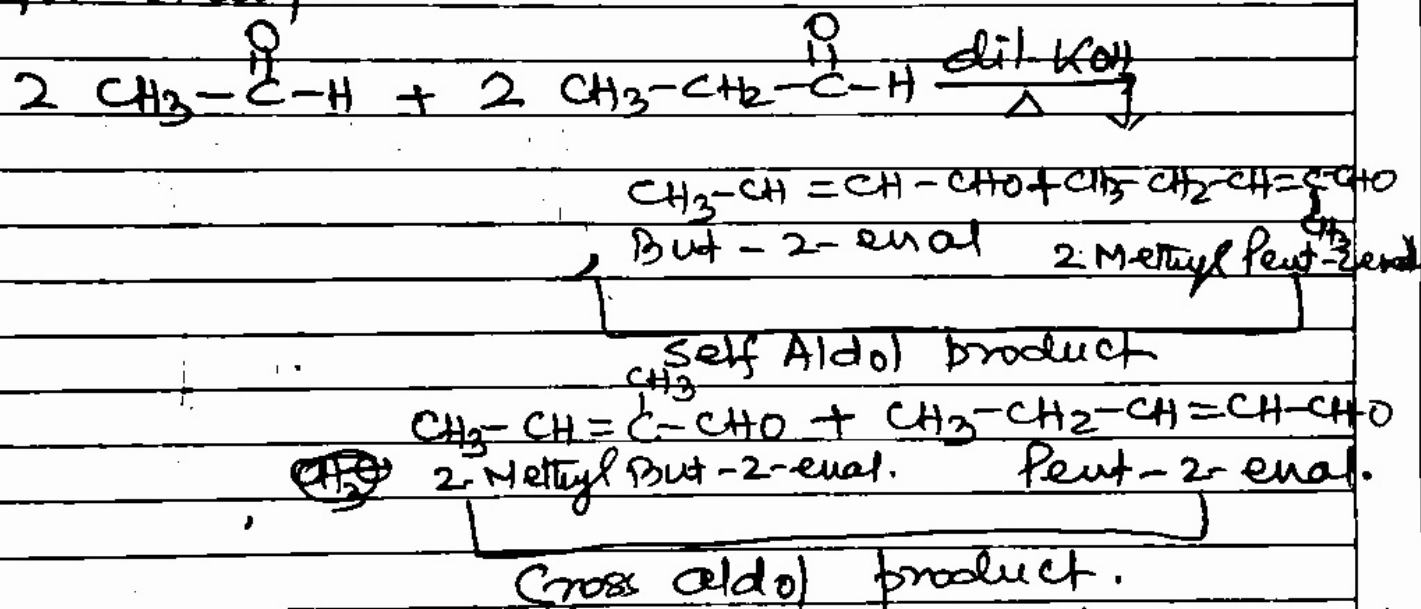


DH Part I, Part II, group B. (Imps).
DR. S. K. Jha.
Lee-10

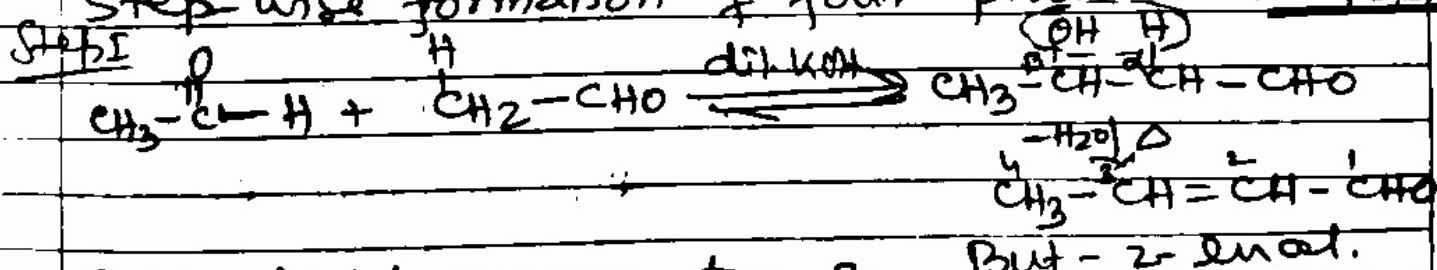
Cross Aldol Condensation $\rightarrow$

The reaction of Cross aldol Condensation is similar to Aldol Condensation but the difference is in this reaction two different type of Aldehyde (like ethanal & propanal) or one aldehyde & one ketone (like ethanal & propan-2-one) or two different Ketones (like propan-2-one & ~~butan-2-one~~ butan-2-one), which must contain α -hydrogen will react in presence of dil NaOH or KOH to form a mixture of product.

During reaction two moles of each aldehyde or ketone will take part in reaction, first it will show the products due to same molecules aldol condensation which will form two equal product. In second case two different carbon containing carbonyl compound will show aldol condensation and again give two equal product. In this way there are four products that's why it is called it gives the mixture of products. for example.



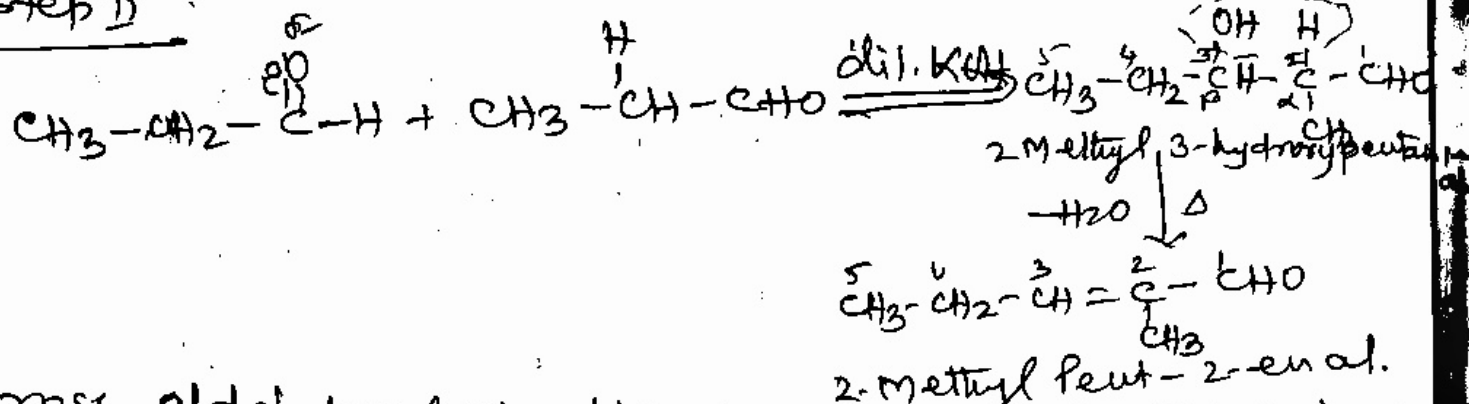
Step wise formation of four products :- Self Aldol



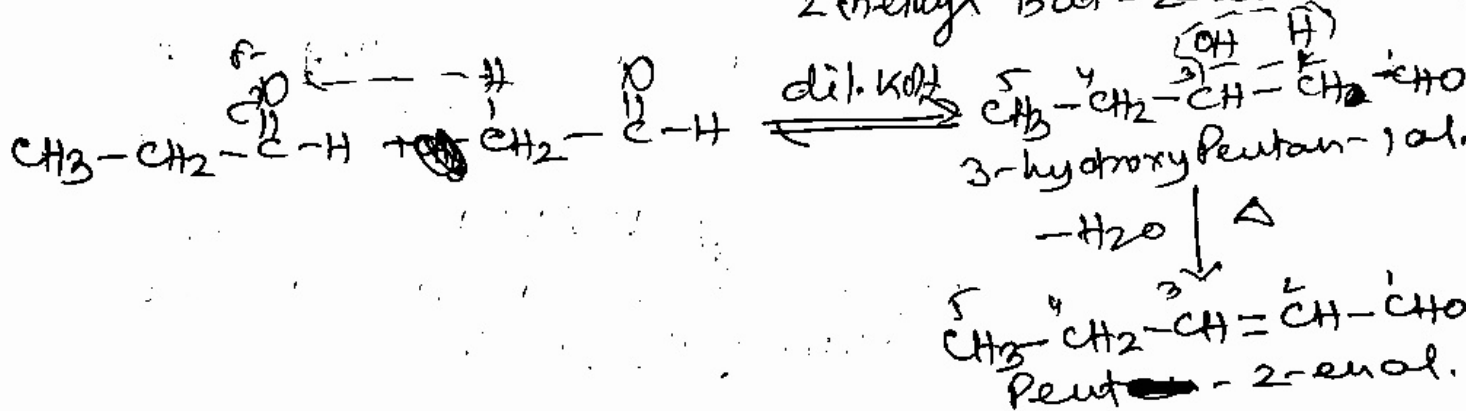
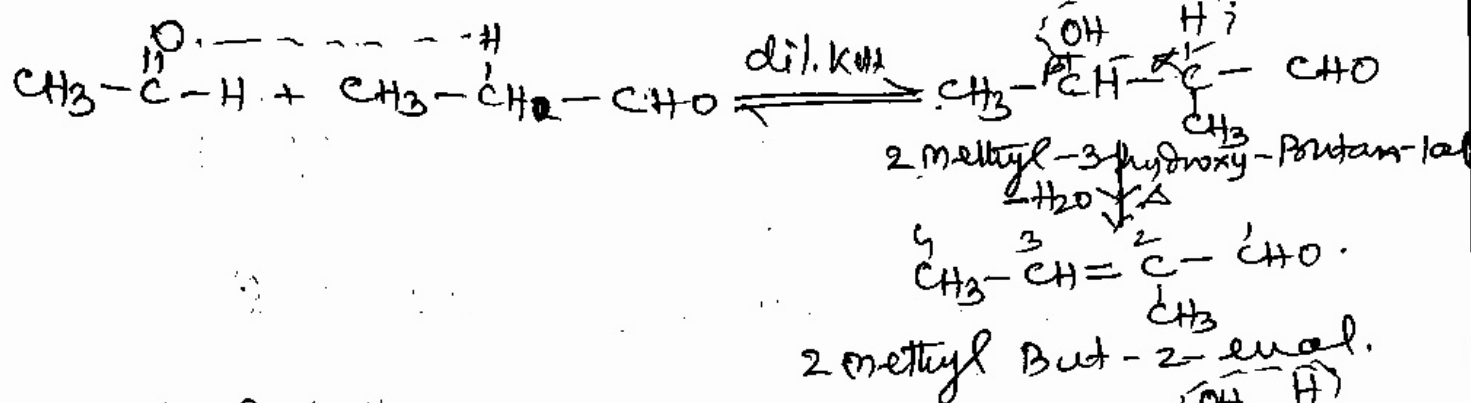
Self Aldol means two same type of aldehyde (having same no. of carbon atom) will take part in reaction.

Teacher's Signature : _____

Step II



Cross aldol products (two different Aldehyde will take part in chemical reaction).



In this way four products are formed two due to Self Aldol Condensation and two due to Cross aldol Condensation. The last steps give the name of reaction i.e. Cross aldol Condensation.

