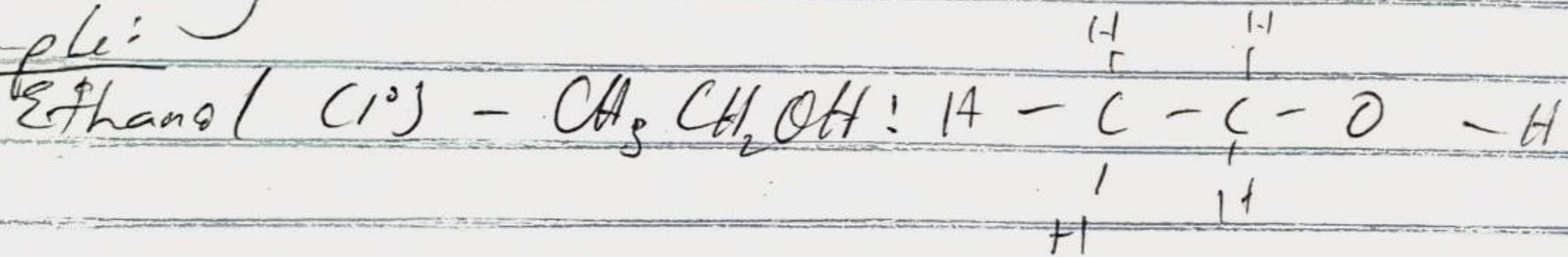


Name: John - Nelson Emmanuel
 College: Sciences
 Department: Geology
 matric no. 19151141008

Ans

(a) Classification based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the number of hydrogen atoms attached to the carbon atom bearing the hydroxyl group are 2 or 3, it is called "primary alcohol" (1°) [In primary alcohol the hydroxyl group is attached to the primary or (terminal) carbon atom in the molecule. It is characterised by H_2OH]. If it is one hydrogen atom attached to the carbon atom bearing the hydroxyl group, it is called "secondary alcohol" (2°) [In secondary alcohol, the -OH group on a secondary carbon atom; it is characterised by (HOH)]. And if no hydrogen atom is attached to the carbon atom bearing the hydroxyl group, it is called a "tertiary alcohol" (3°) [In tertiary alcohol, the -OH group is a tertiary carbon. It is characterised by $-OH$].

Example:



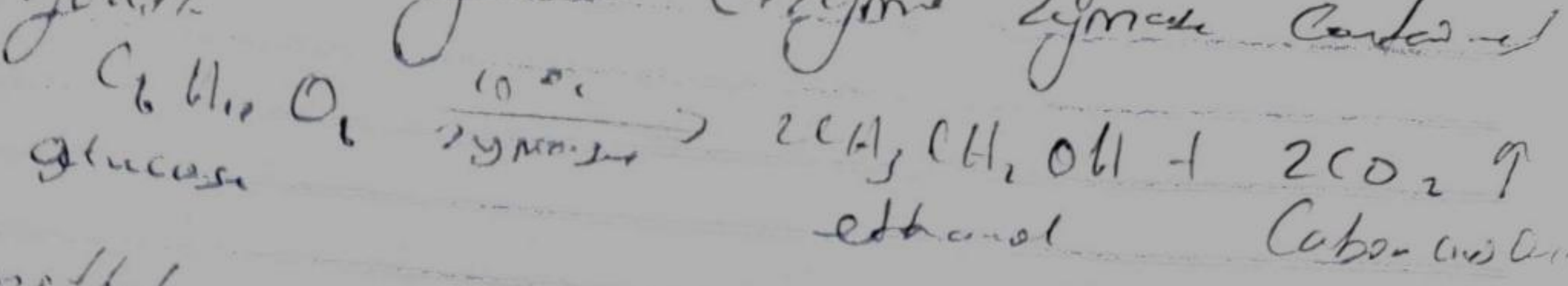
(b) Classification based on the no. of hydroxyl group they possess.

(i) Monohydric alcohols have only one hydroxyl group per molecule present in the alcohol structure.

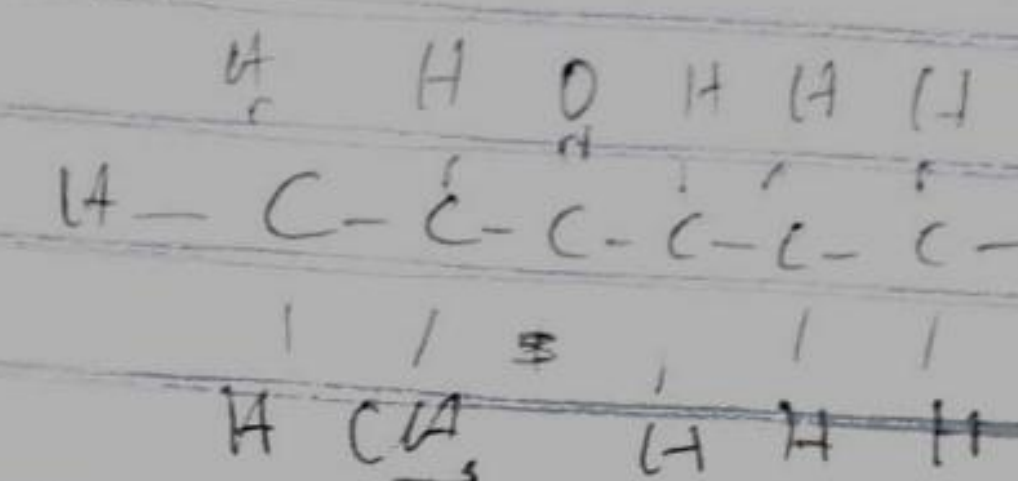
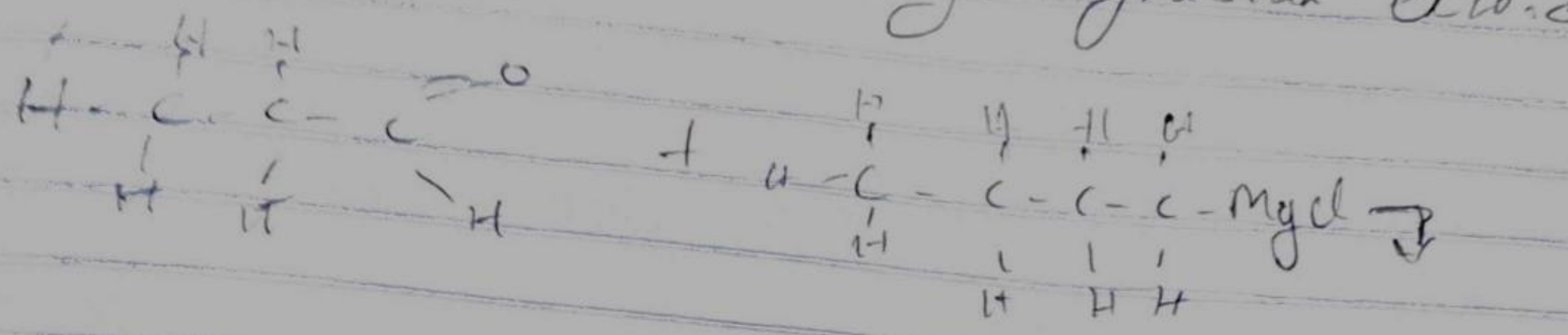
(ii) Dihydric alcohols, also called glycols have 2 hydroxyl groups present in the alcohol structure.

(iii) Trihydric alcohol (Triols); have 3 hydroxyl group

The glucose at constant temperature of 15°C is the converted to alcohol by the enzyme zymase contained

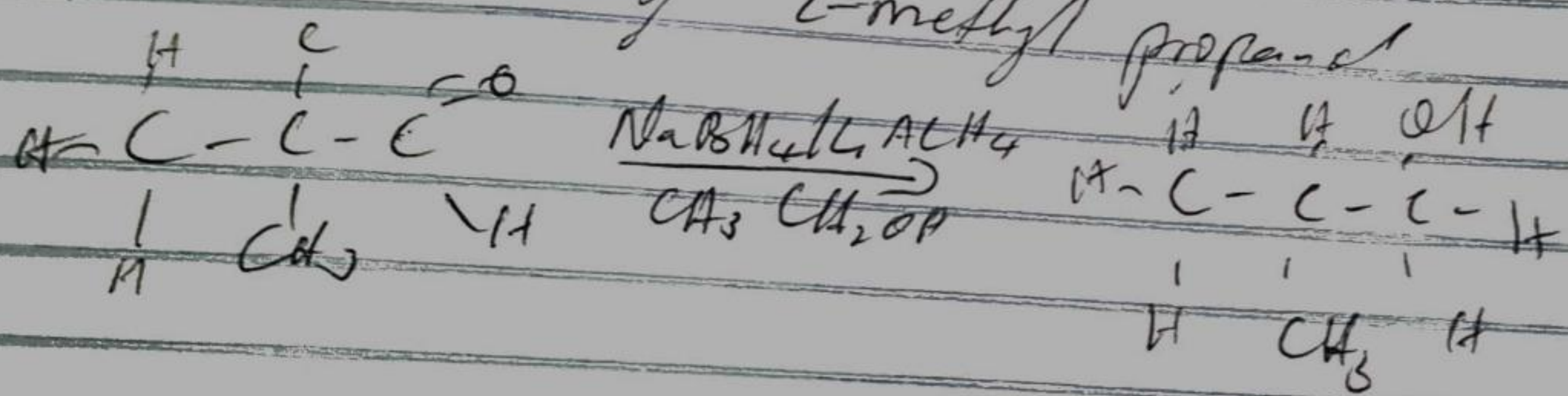


⑥ 2-methyl propanal + Butyl magnesium chloride → ?

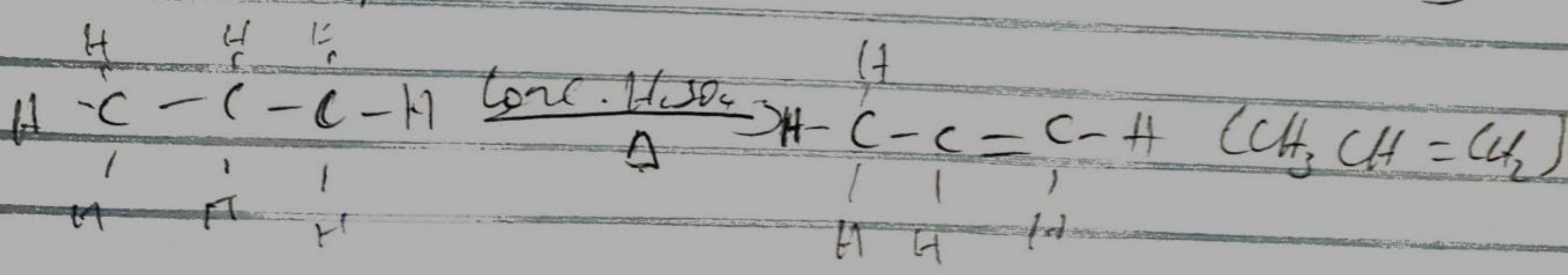


2-methyl 3-heptanal

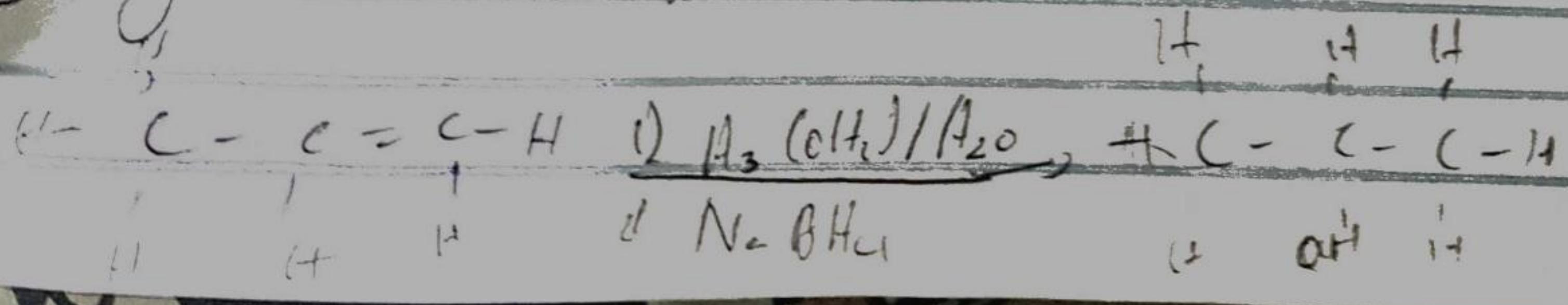
⑦ Reduction reaction of 2-methyl propanal



⑧ ~~propose a~~ Dehydration of propan-1-ol to propene using conc. H_2SO_4

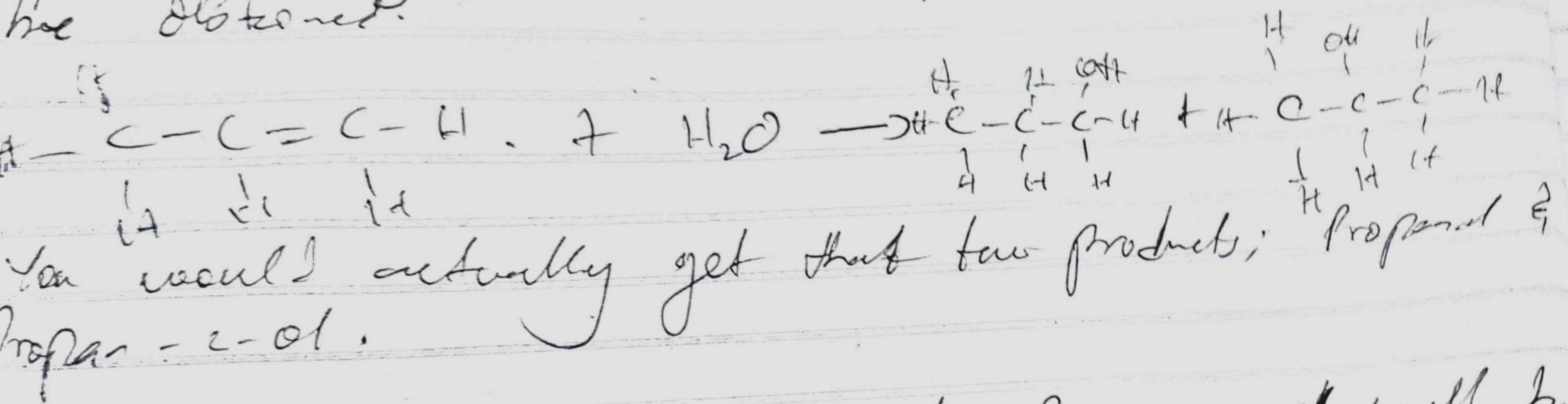


⑨ (b) Oxymercuration - Demercuration



OR.

③ Since propene is asymmetrical on hydrolysis or acid, 1,2-addition of water using a Markovnikov procedure. Propan-2-ol can be obtained.



But following Markovnikov's rule, Propan-2-ol would be the major product.