under the Basic condition condition.

$$\frac{1}{1000} + \frac{1}{1000} + \frac{1}{10000} + \frac{1}{1000} + \frac{$$

(b)
$$H = \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2$$

Keto Form Enol Form.

Be carefully.
This is simple mechanism. The proton is comp come from acid or base.

12 toblem 22-1-2

$$(C) \begin{array}{c} H = 0 \\ V =$$

$$(d) \qquad (d) \qquad (d)$$

(e)
$$y - c = c - oy$$
 $y - c = c - oy$
 $y - c = c - oy$
 $z = c - oy$
 $z = c - oy$
 $z = c - oy$

(f)
$$\bigcirc -\frac{1}{2} = \frac{1}{2} = \frac{1}{2}$$

1) to blem = 22-4.

$$Al_3 - C - C - C - D$$

$$Al_3 - C - C - D$$

$$CH_3 - C - C - D$$

$$Enol.$$

Problem 22-6

$$cH_3$$
 $cH_3 - cH_3 - cH_2 - cH_2 - cH_3 + br br$

$$\rightarrow CH_3 - CH_2 - CH_2$$

$$\rightarrow 4/3 - 4/2 - 4/2 - 4/2 - 2/2 - Br. \rightarrow 1/3 Br.$$

$$\rightarrow CH_3 - CH_3$$

$$\Rightarrow cy_3 - cy_2 - cy - c_1 - c_2 - c_3 - c_4 - c_4 - c_5 - c_5 - c_4 - c_4 - c_5 - c_5 - c_4 - c_4 - c_5 - c_5 - c_5 - c_5 - c_4 - c_5 - c$$

Methyl 2- bromo - 3-methy pentanoate.

Problem 22-10-

(4)
$$cl_{3}-cl_{5}-o-cl_{5}$$
 $cl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5}$ $dl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5}-cl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5}-cl_{5}-cl_{5}-cl_{5}-cl_{5}-cl_{5}-cl_{5}$ $dl_{5}-cl_{5$

1 roblem 22-10-2

Ptoblem 22-10-3. Propl hallde. I Malonic ester methyl hallde methyl hallde CH3-CH2-0-C C-0-CH2-CH3 + Mat C) CH2-CH3 -> CH3-CHb-O-0 CO-0-0Hb-CHb-X

propyl halide

Bromo pro such as Bromo propone. $\rightarrow cH_3-cH_5-o-b = cH_5-cH_3$ $4 - cH_5-cH_5 + H_a + Och_5 cH_3$ $\longrightarrow cH_3 - cH_5 - o - cH_5 - cH_3$ $= cH_3 - cH_5 - o - cH_5 - cH_3$ $= cH_5 - cH_2 - cH_3 + cH_3 - x$

problem 22-10-4 C) (1/3 - CH - CH - CH - C- OH) Isobuty halide. Malonic ester CM3-CM2-0-8 C-0-CM2-CM3 + Hat COCM2-CM3 -> CH3-CH-0-E C E-0-CH6-CH3
+ CH3-CH-CH5-X H > 2-04 H > -04-043

problem 22-13-1 CH3=64=0-2. Ethyl aceto acetate Acetoucetic ester. CH3-CH5-CH3 + CH3-CH-CH5-Br. 1/3 - 1/3 - 1/3 - 1/3 - 1/3 - 1/3 - 1/3 - 1/3 - 1/3 - 1/3 $Ho - \frac{1}{2} \frac{1}{4} \frac{1}{4}$

Problem 22-13-2 > From Ethyl acetoace tate From Isobutul halide. From Ethy ace-to-ace-ta-te From ethelbenzone hallde (1)3-ab-0-8, cl-a)3 + Ma (0) al2-cl/3 Ethyl ace to ace take > als-als-o-2 ge als + (0) als-als- Br 2- Bromo ethyl benzene CH3-CH3-0-8 (8-CH3) Ht 4 - 2 - 0/3

y - 2 - 0/3

y - 0/2 - 0/2