Problem 23-1.—

Aldol
$$rxn = a | dehyde + a | cohol$$

Ald + ol = Aldo

In Aldol rxn , the aldehyde must have

In Aldol 1xn, the aldehyde must have a hydrogen at & carbon.

Problem 23-1-2

Problem 23-3 -

Al dol condensation.

⇒ aldehyde + alcohol + H2O.

$$(a) \qquad (b) \qquad (c) \qquad (c)$$

under the basic condition.

Under the acid condition.

Problem 23-3-2.

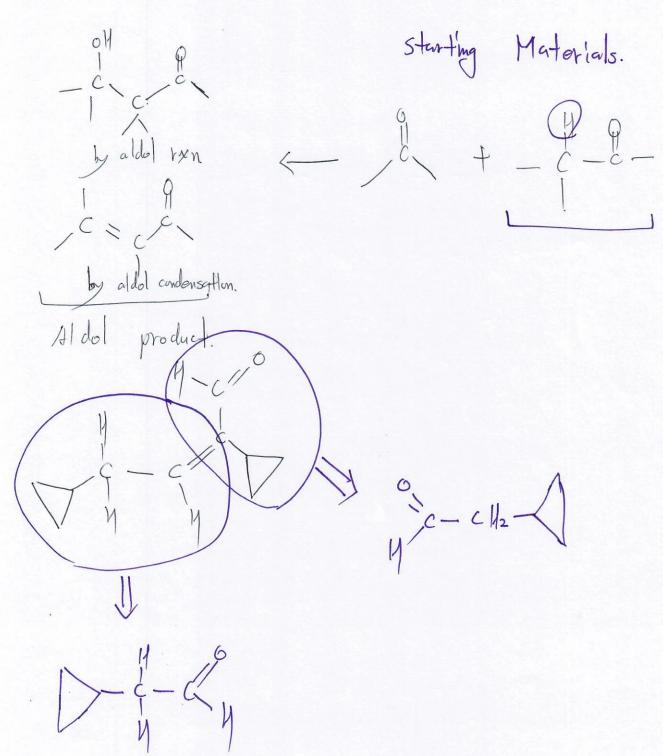
Problem 23-3-3.

$$\rightarrow cl_3 - cl_2 - cl_3 - cl_3 - cl_3 - cl_3 - cl_4 - c-l_4$$

$$\rightarrow c_{13}-c_{13$$

Think about addol condensation under the addic condition.

Problem 23-7.



Pto blem 23-11-1

a)
$$c_{13}$$
 $c_{14} - c_{15} - c_{15} - c_{15} + h_{16} + c_{15} + h_{16} + c_{15} + h_{16} + c_{15} + c_{15}$

Problem 23-11-2.

$$\rightarrow \begin{array}{c} \overline{c} = 0 - \overline{c} = 0 \\ \overline{c} = 0 - \overline{$$

Ptoblem 23-14

Problem 23-16.-1

Michael Donor Acceptor.

$$\Rightarrow \frac{C_{3} - c_{3}^{6}}{4 - c_{3} + c_{3}^{6}} + \frac{10 \text{ Et}}{4 + 10 \text{ Et}}$$

$$c_{3} = \frac{10}{6}$$

$$\rightarrow \frac{1-c}{\sqrt{2}}$$

$$+ \frac{1}{\sqrt{2}}$$

$$= \frac{1}{\sqrt{2}}$$

$$\rightarrow \frac{2}{4-\zeta-\zeta}$$

10 to blem 23-16-2

(b)
$$CH_{S} = CH_{C} = CH_{C} = H_{C} + H_{C} = CH_{C} = H_{C} + H_{C} = H_{C} = H_{C} + H_{C} = H_{C$$

$$\rightarrow \frac{cH_3-c''^6}{4-c-cH-c=H} + \frac{1}{40EE}$$

$$cH_3$$

$$- \frac{cH_3 - cP}{C}$$

$$- \frac{1}{C} - \frac{cH_2 - cH_2 - c = H}{cH_3 - c}$$

$$- \frac{cH_3 - cP}{C}$$

$$- \frac{1}{C} = \frac{cH_2 - cH_2 - c = H}{cH_3 - c}$$

$$CH_3$$
 C_1^{0} CH_3 CH_4 CH_5 CH_6 CH_6 CH_6 CH_6 CH_7 CH_8 CH_8

$$\longrightarrow \begin{array}{c} CH_3 \\ + CI_3 \\ -CI_4 \\ -CI_5 \\ -CI_5 \\ -CI_5 \\ -CI_5 \\ -CI_6 \\ -CI_6$$

Ptoblem 23-19-1

Lly diolysis

$$\frac{\partial}{\partial u} = \frac{\partial}{\partial u} - \frac{\partial}{\partial v} - \frac{\partial}{\partial v} = \frac{\partial}{\partial v} + \frac{\partial}{\partial v} = \frac{\partial}$$

problem 23-19-2

$$\rightarrow \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac$$

In he Enamhe.

Mydrolysls

Problem 23-19-3

$$+ c |_{3} c |_{=} c |_{-} c |_{3}$$

$$-3$$

$$\frac{1}{\sqrt{1}}$$

Hy droly sls