problem 19-1. -1 M3 - CH2 - CH3. (U) R- 6-R Ke-lone - e → - one 2 - Methy - 3 - pentamone. 2 - Methy - pentan - 3 - one. R- 2-H CH2-CH2-CH 5 aldehyde aldehyde -e - - al 3 - Phenyl propomal. $cH_3 - \frac{1}{5} - cH_2 - cH_2 - cH_3 - \frac{1}{5} - cH_3 - cH_3$ (() 2. 6 - octane dione In cyclic aldohyde

The comparison of the compar trans - 2 - methyl cyclo hexane carbalde hyde CH3 - CH = CH - CH2 - CH

Cis - 2.5 - Dimethyl cyclohexanone

120ben 19-4 4

(4) 3 - Hexy ne

 $CH_3 - CH_2 - C = C - CH_2 - CH_3$ $Hg^{2+} 504^{2-}$

 $-> c_{13} - c_{15} - c_{15} - c_{15} + > H^{+}$ $+ \frac{1}{2} s_{04}^{2} - c_{15} + c$

 $\rightarrow c + 3 - c + 2 - 2 = 4 - 2 + 2 - 2 = 4$

Problem
$$19-4-2$$

(b) $(9) + (1)_3 - (2)_4 + (4)_5$

Problem 19-6.

1102-20-00 CM3-0-00 M Electron-withdrawing Electron-donating.

The electron - with drawing mitto group makes

the aldehyde can bon of p-nitroben zaldehyde

more electron-poor (more electrophille) and more reactive

to toward mudeophiles than the aldehyde car bon

of p-methoxy benzaldehyde.

Problem 19-8

Two HIOM is used on IXII. and

Section 19-7

Addition of Grignand Reagents. RMgX. (Simple me chanlsm) R'/ R'(or H) + KMg X. $\rightarrow R' - \frac{c}{c} - R'' + Hoi M_9 X.$ < More defail) R'/E' P" + RMgX 5-st $\rightarrow R' - c' - R'' \rightarrow R' - c' - R'' + R'$ $\rightarrow R' - c' - R'' + H_2O' \rightarrow R' - c' - R'' + MOMgX.$ problem 19-10.

$$+ ch_{3} - ch_{5} - h + h_{2} = 0$$

$$+ ch_{5} - ch_{5} - h + h_{2} = 0$$

$$+ h_{3} = 0$$

problem 19-12. etts-cle 1 - cl/2 - cl/3) = from d'ethylamine. from cyclopentamone + c/3-c/2-H/-c/12-c//3 CH3-CH2 1/2-CH3