

上海电视大学化学系试用教材

有机化学习题解答

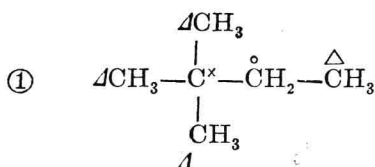
化学系教学小组选编

上海电视大学

答 案

烷 烃

1.



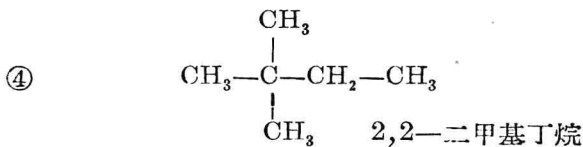
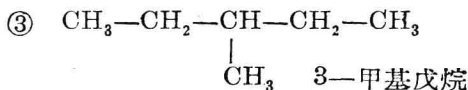
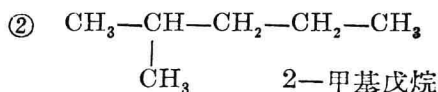
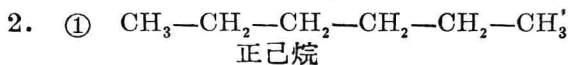
$\triangle$ 伯碳原子，其所连接的氢原为伯氢原子。

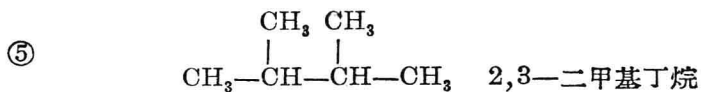
$\bigcirc$ 仲碳原子，其所连接的氢原为仲氢原子。

*叔碳原子，其所连接的氢原为叔氢原子。

$\times$ 季碳原子。

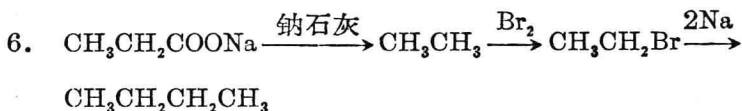
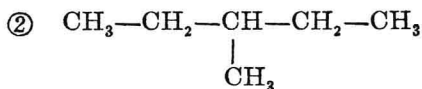
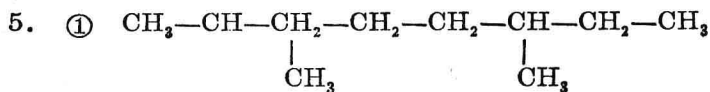
$\textcircled{2}$ 略





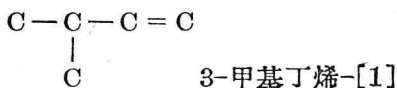
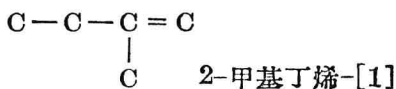
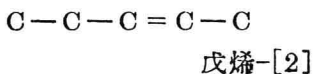
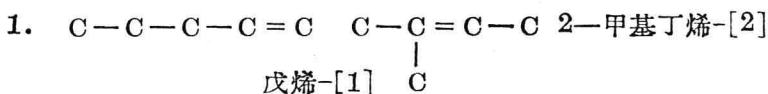
3. ① 2,4—二甲基己烷 ② 2,2,5—三甲基己烷

4. 2,2—二甲基丁烷

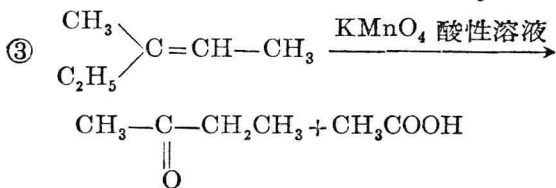
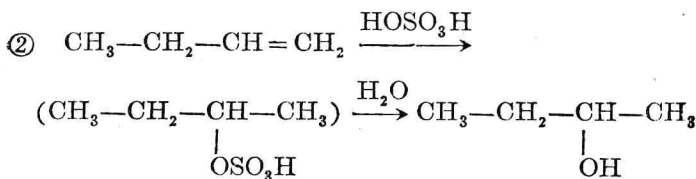
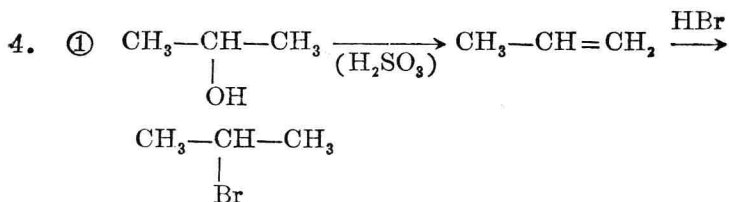
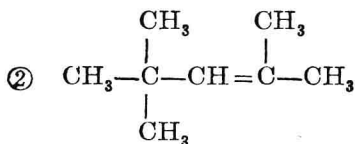
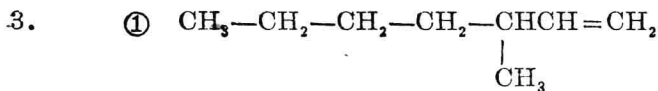


· 故原化合物为 $\text{CH}_3\text{CH}_2\text{COONa}$

烯 烃

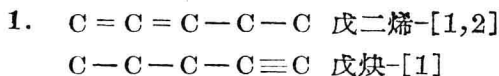


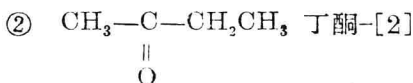
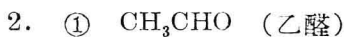
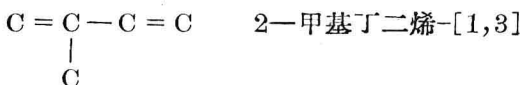
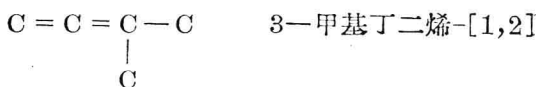
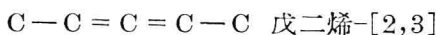
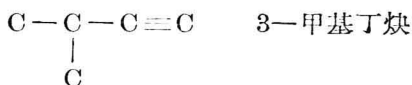
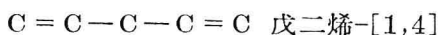
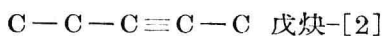
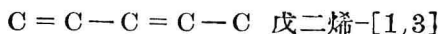
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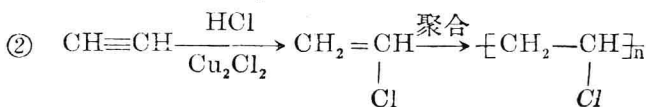
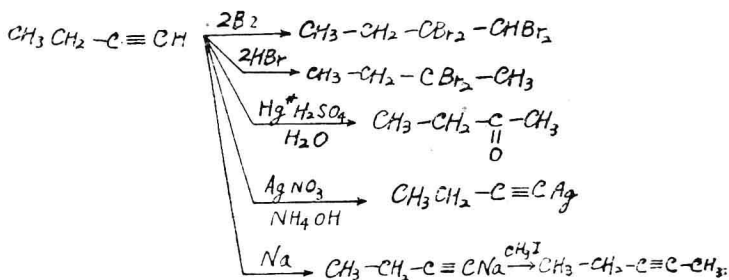
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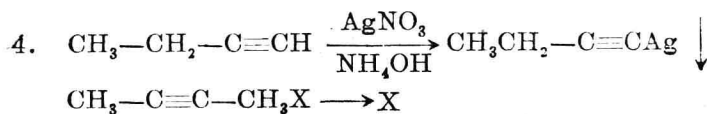
炔烃和二烯烃



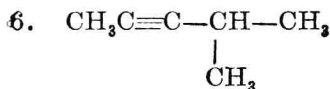
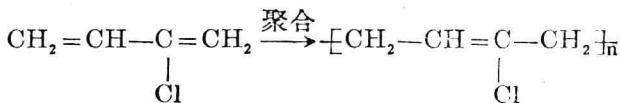
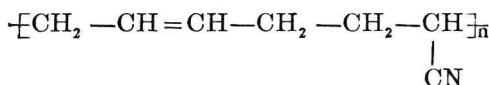
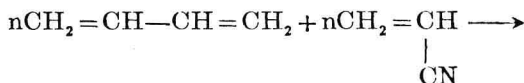
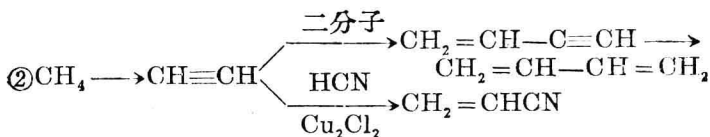
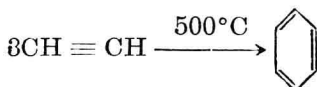
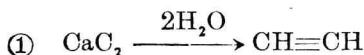


3. ①

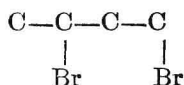
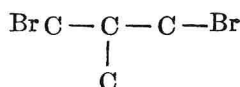
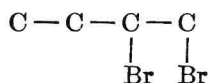
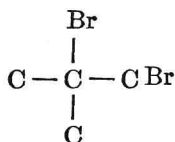
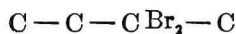
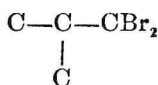
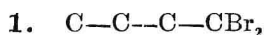




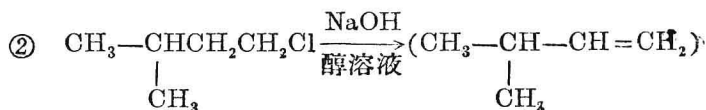
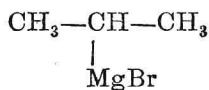
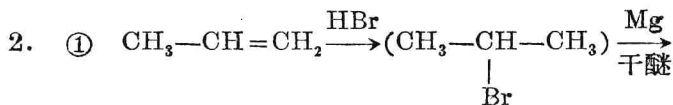
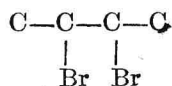
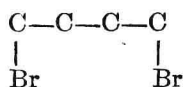
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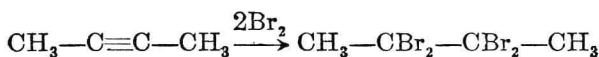
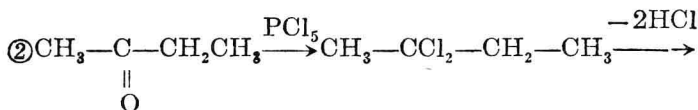
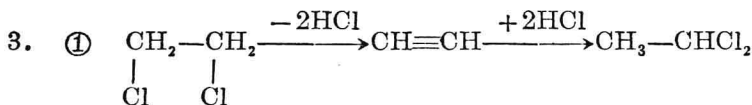
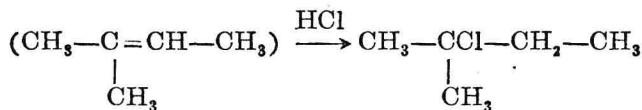


烴的鹵素衍生物

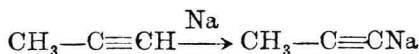
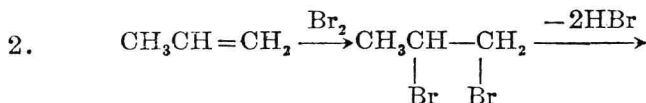
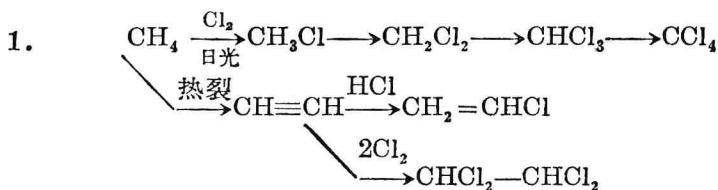


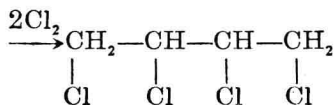
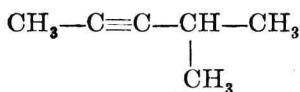
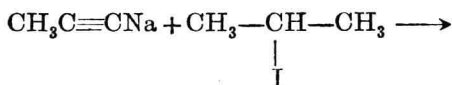
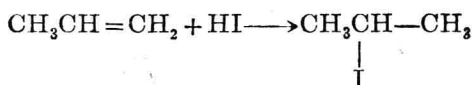
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第一章至第五章阶段复习题

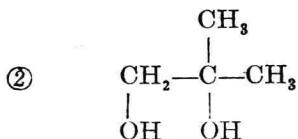
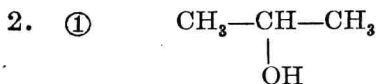




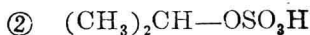
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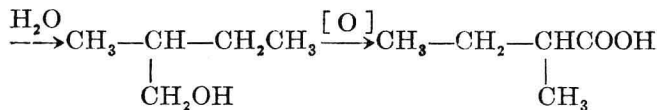
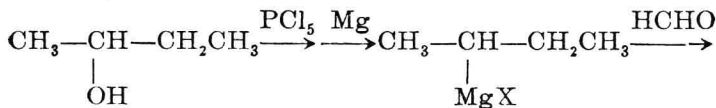
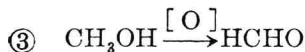
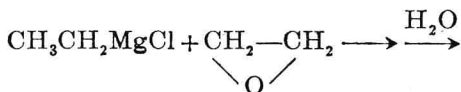
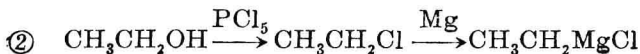
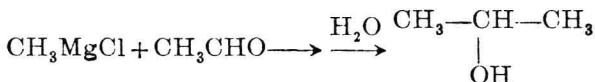
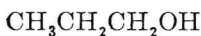
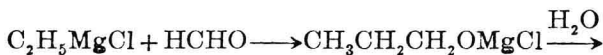
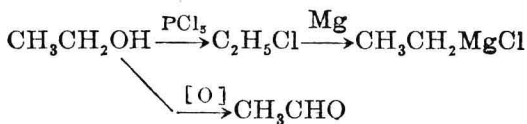
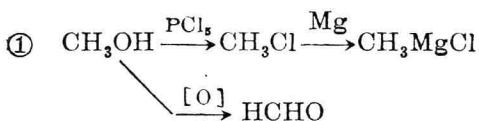
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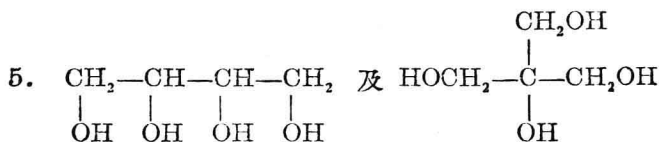
1. 2,3-二甲基戊醇-[3]



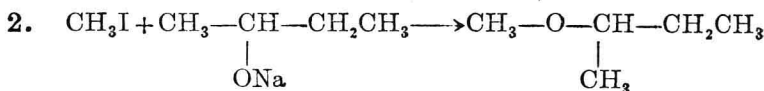
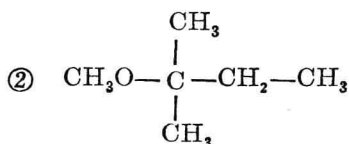
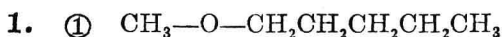
3. ① 硫酸乙酯钠





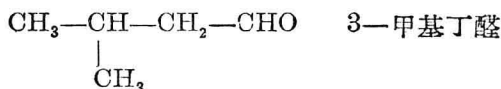
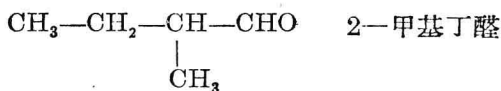


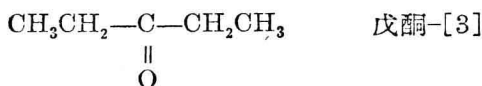
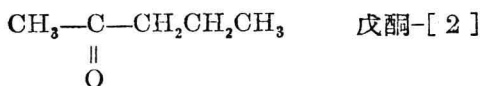
醚



3. 查本校教材表 $\text{C}_5\text{H}_{11}\text{OH}$ 知各种异构体中
 $\text{CH}_3(\text{CH}_2)_3\text{CH}_2\text{OH}$ 的沸点为 138°C
 故原化合物结构为 $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$

醛 和 酮



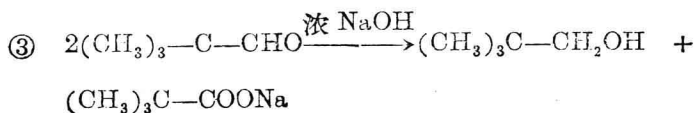
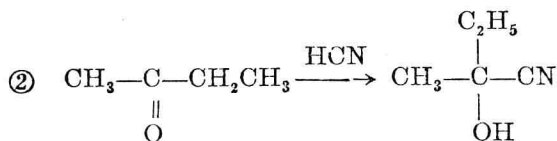
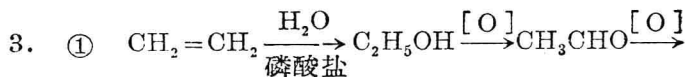


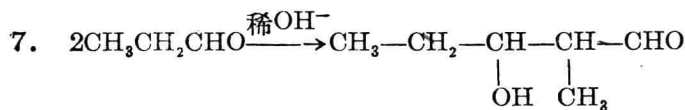
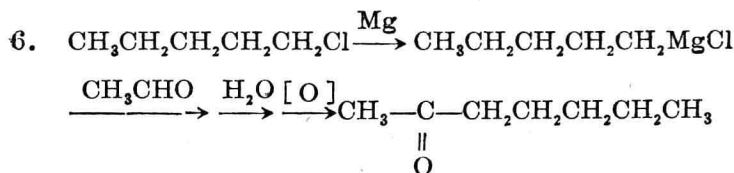
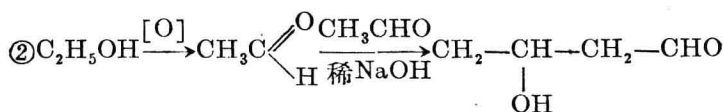
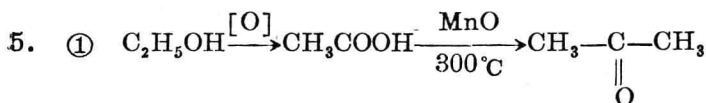
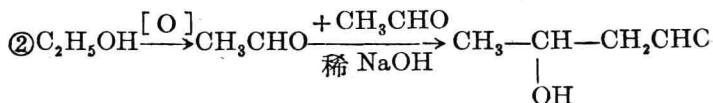
2.

① 丁二酮

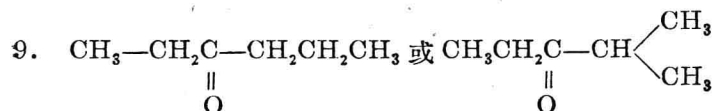
② 乙烯酮

③ 丙烯醛

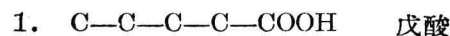


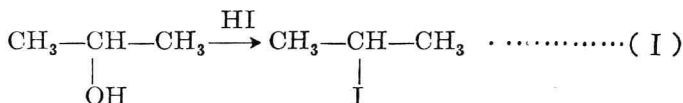
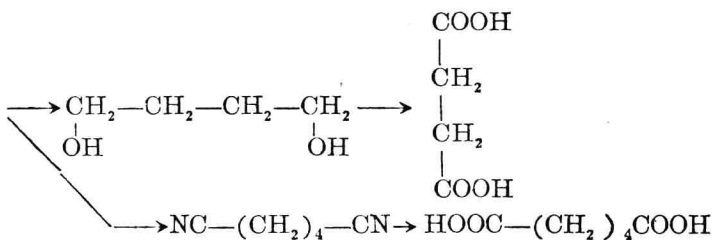
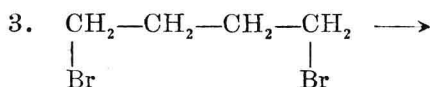
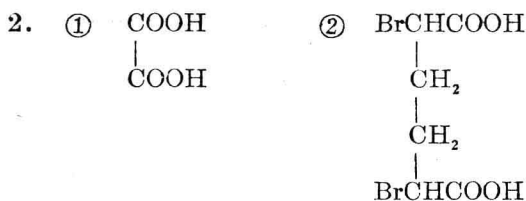
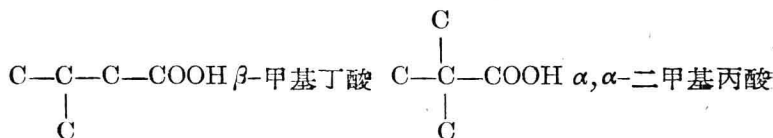
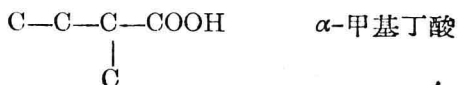


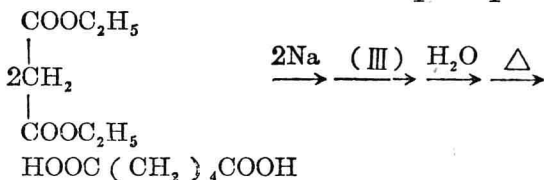
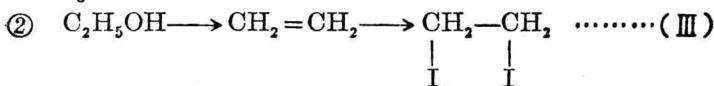
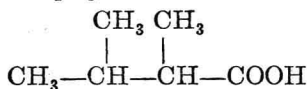
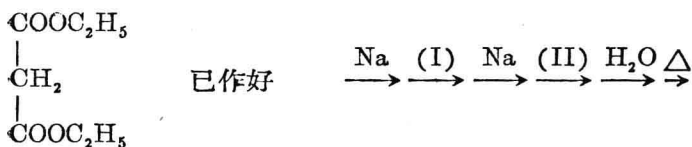
8. ①②都能起反应



羧 酸







5. ①甲酸有银镜反应 而乙酸及丙二酸无

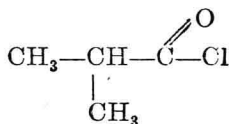
②加热时丙二酸会放出 CO_2 而乙酸无

6. 略

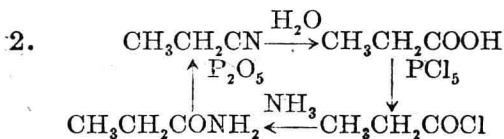
羧酸衍生物

1. ① 乙酰氯 ② 乙酸乙酯 ③ 乙酸乙酯

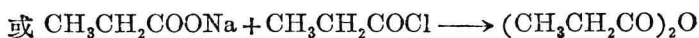
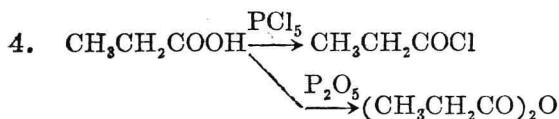
④ 乙酰胺 ⑤ 丙(酸)酐 ⑥



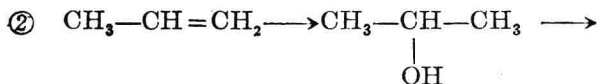
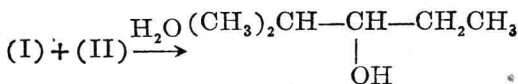
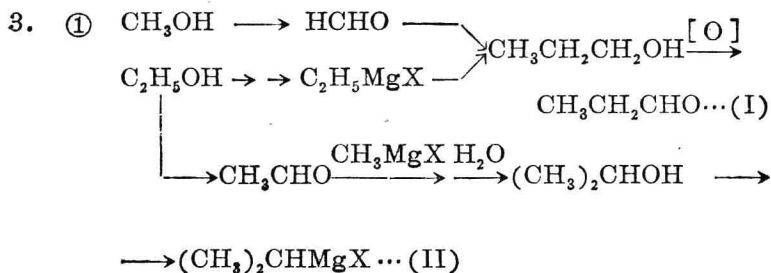
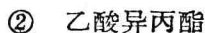
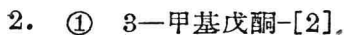
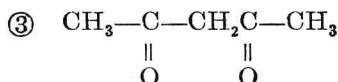
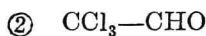
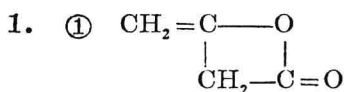
⑦ $(\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{O})_2\text{O}$

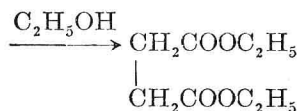
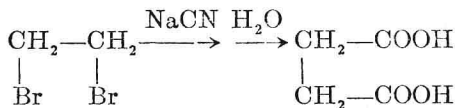
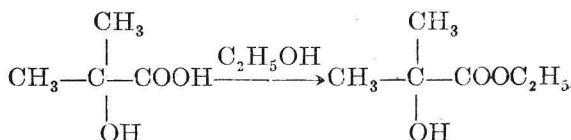
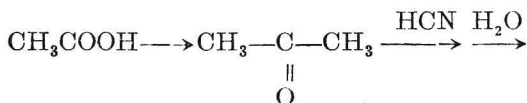
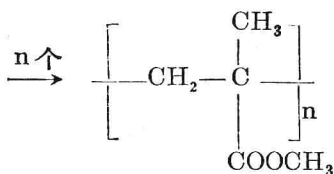
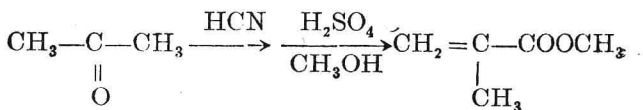


3. CH_3COCl 易水解生成 HCl 而 $\text{CH}_3\text{CH}_2\text{Cl}$ 不易。



第六章至第十章阶段复习题





4. ① $\text{C}_2\text{H}_5\text{OH}$ 可与 Na 作用，而 $\text{C}_2\text{H}_5\text{OC}_2\text{H}_5$ 不能作用。

② 乙醛有银镜反应而乙醇、乙酸无。

乙醇及乙酸中加乙酸，有香味者（生成酯）为乙醇。

③ 戊醛有银镜或褪色品红反应，戊酮-[2]及戊酮-[3]无。