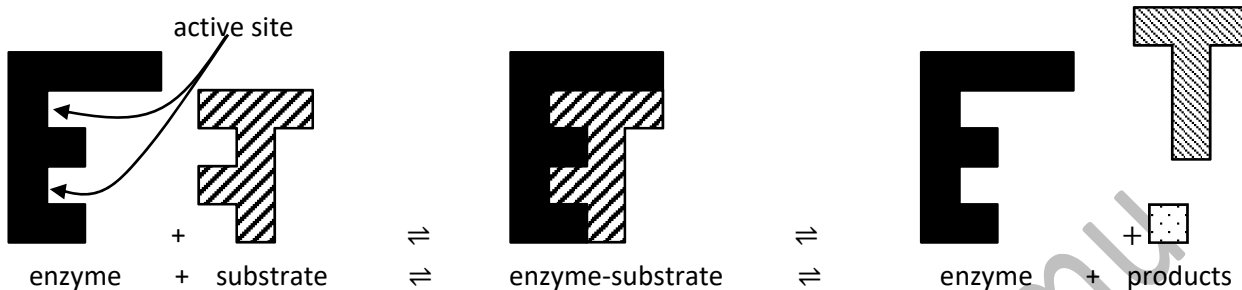


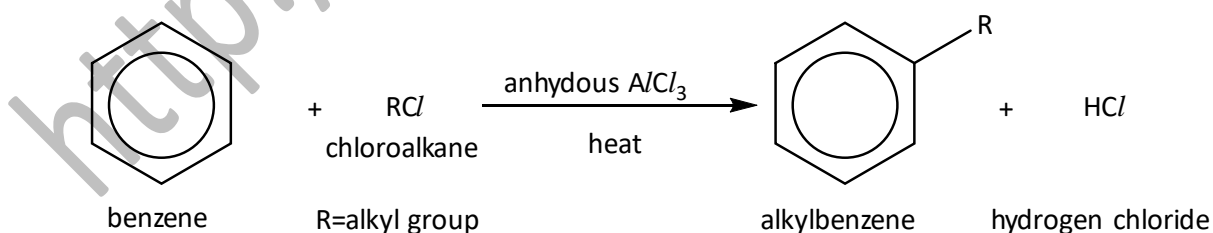
CHEMISTRY GENERAL EQUATIONS FOR HIGHER SCHOOL CERTIFICATE

1.

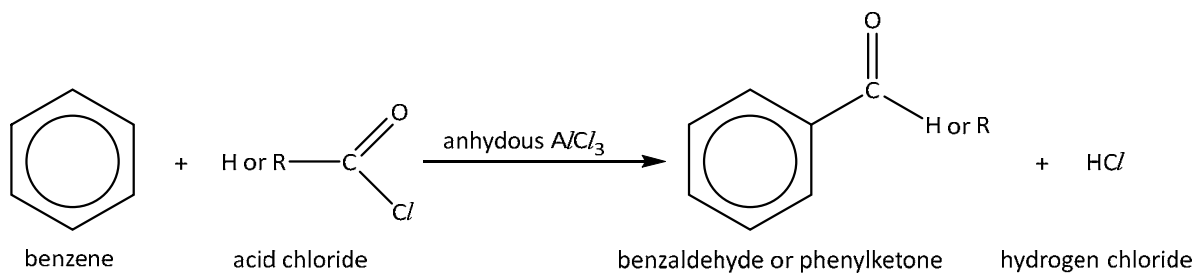


2. $2 \text{M(s)} + \text{O}_2(\text{g}) \xrightarrow{\Delta} 2 \text{MO(s)}$, where M = Group 2 metal
3. $\text{M(s)} + 2 \text{H}_2\text{O(l)} \rightarrow \text{M(OH)}_2(\text{aq}) + \text{H}_2(\text{g})$, where M = Group 2 metal
4. $\text{M(s)} + 2 \text{H}^+(\text{aq}) \rightarrow \text{M}^{2+}(\text{aq}) + \text{H}_2(\text{g})$, where M = Group 2 metal
5. $\text{MO(s)} + \text{H}_2\text{O(l)} \rightarrow \text{M(OH)}_2(\text{aq})$, where M = Group 2 metal
6. $\text{MCO}_3(\text{s}) + 2 \text{H}^+(\text{aq}) \rightarrow \text{M}^{2+}(\text{aq}) + \text{H}_2\text{O(l)} + \text{CO}_2(\text{g})$, where M = Group 2 metal
7. $2 \text{M(NO}_3)_2(\text{s}) \xrightarrow{\Delta} 2 \text{MO(s)} + 4 \text{NO}_2(\text{g}) + \text{O}_2(\text{g})$, where M = Group 2 metal
8. $\text{MCO}_3(\text{s}) \xrightarrow{\Delta} \text{MO(s)} + \text{CO}_2(\text{g})$, where M = Group 2 metal
9. $\text{H}_2(\text{g}) + \text{X}_2(\text{g}) \rightarrow 2 \text{HX(g)}$, where X = F, Cl, Br, I
10. $\text{Ag}^+(\text{aq}) + \text{X}^-(\text{aq}) \rightarrow \text{AgX(s)}$, where X = Cl, Br, I
11. $\text{AgX(s)} + 2 \text{NH}_3(\text{aq}) \rightleftharpoons [\text{Ag(NH}_3)_2]^+(\text{aq}) + \text{X}^-(\text{aq})$, where X = Cl, Br
12. $\text{H}_2\text{SO}_4(\text{l}) + \text{NaX(s)} \rightarrow \text{NaHSO}_4(\text{aq}) + \text{HX(g)}$, where X = F, Cl, Br, I
13. ammonium salt + base or alkali $\xrightarrow{\Delta}$ salt of the metal + water + ammonia
14. $\text{C}_x\text{H}_y + (x + \frac{y}{4}) \text{O}_2 \rightarrow x \text{CO}_2 + \frac{y}{2} \text{H}_2\text{O}$, $\Delta H = \text{negative}$
15. vapour of alkane of higher $M_r \xrightarrow{450^\circ\text{C, Al}_2\text{O}_3/\text{SiO}_2}$ alkane of lower M_r + alkene of lower M_r + hydrogen

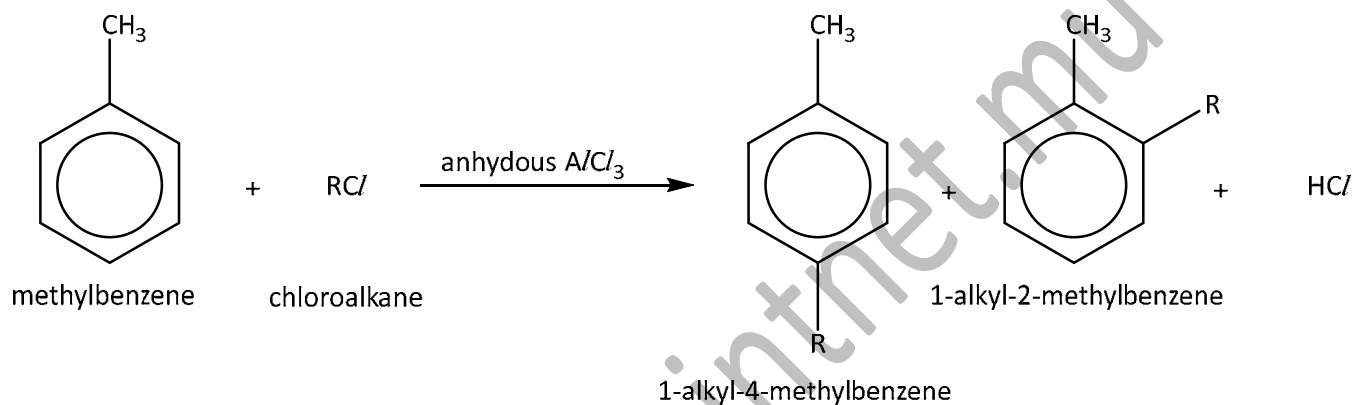
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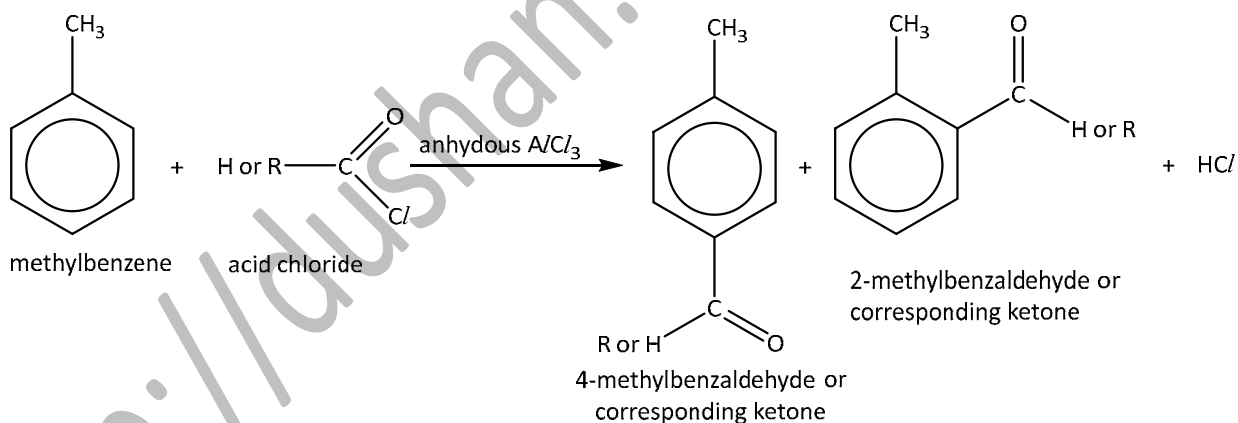
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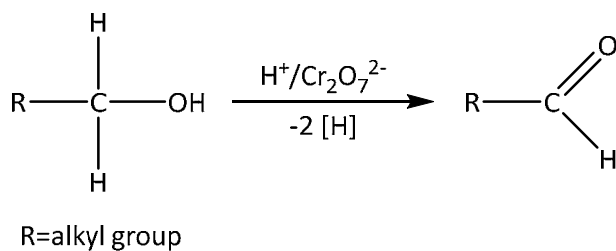
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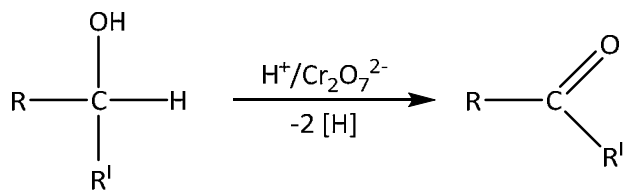
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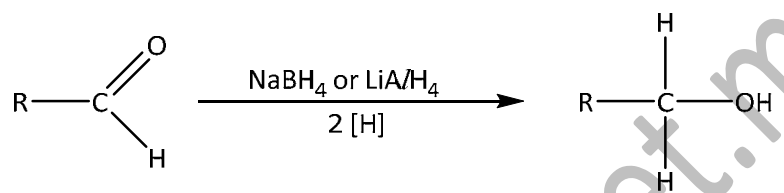


21.



R=alkyl group

22.

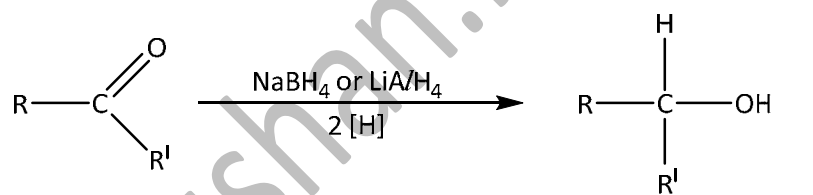


aldehyde

R=alkyl group

primary alcohol

23.

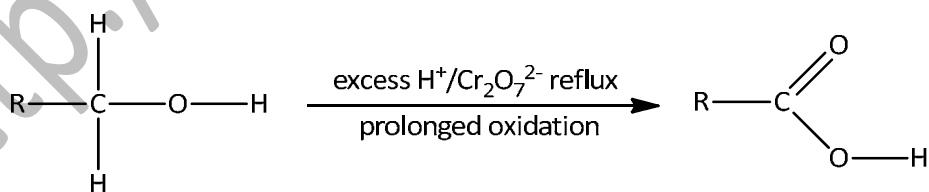


ketone

R, R¹=alkyl groups

secondary alcohol

24.

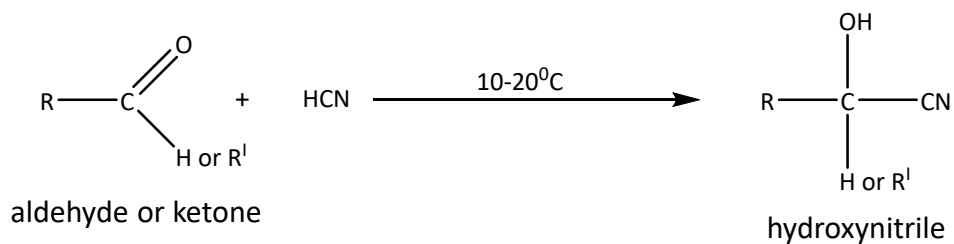


primary alcohol

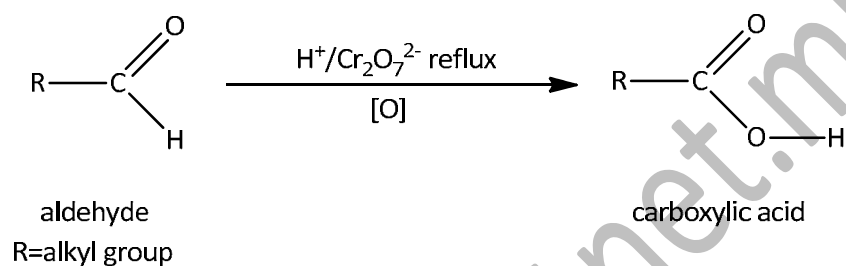
R=alkyl group

carboxylic acid

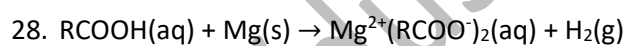
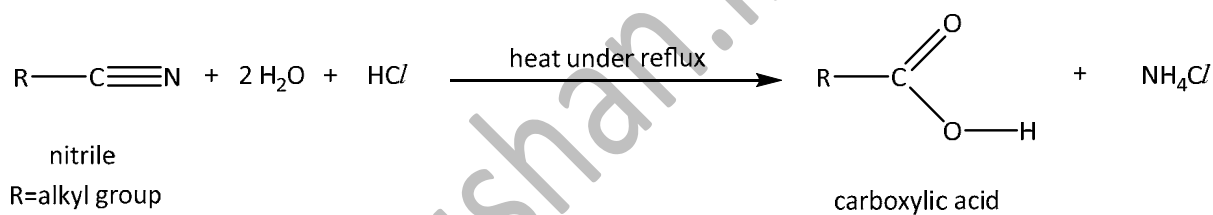
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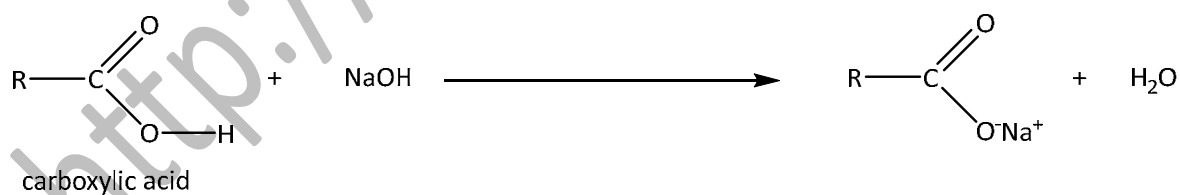
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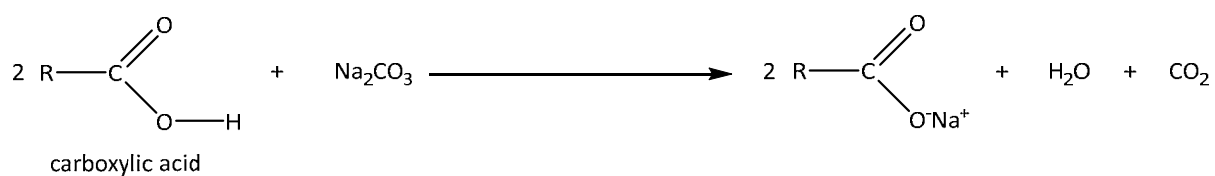
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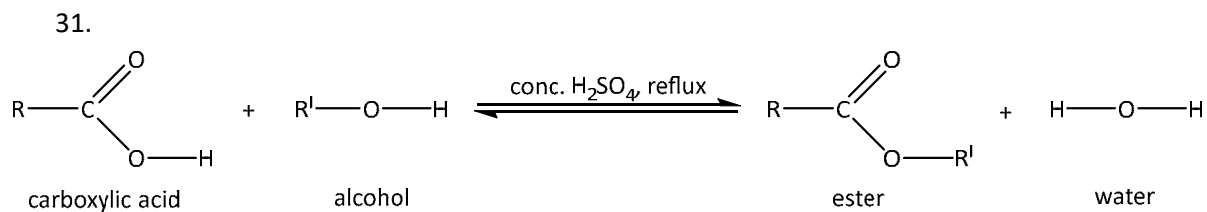


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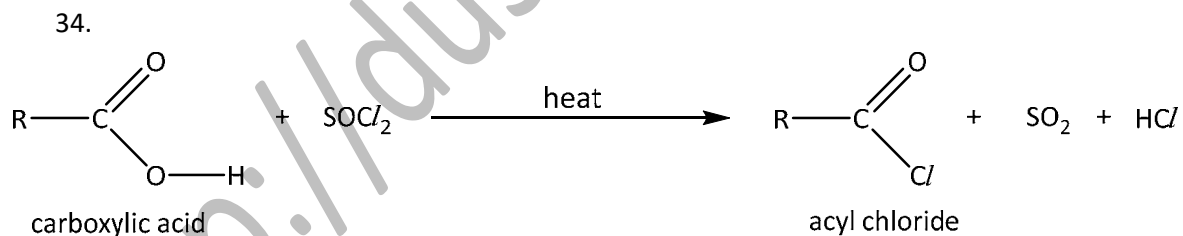
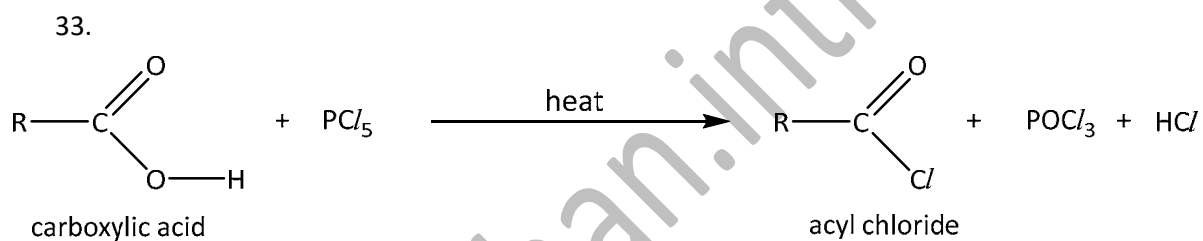
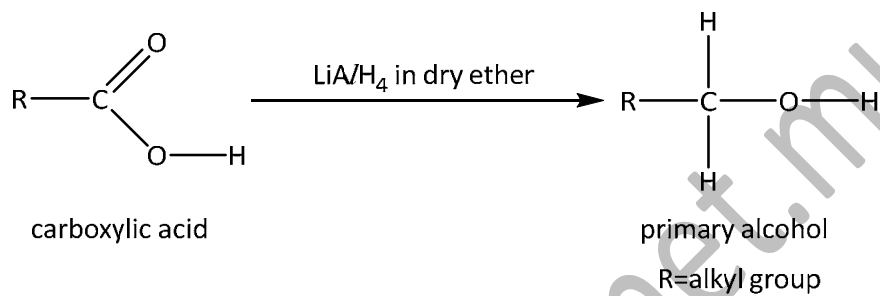


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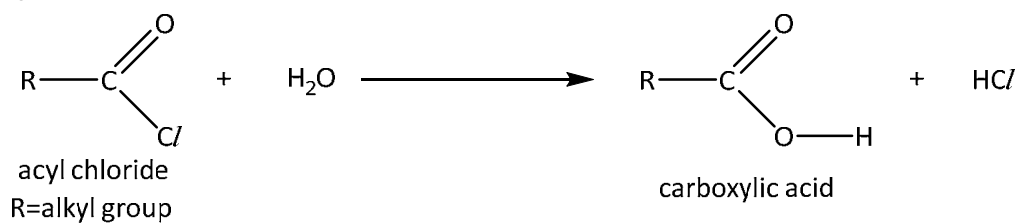


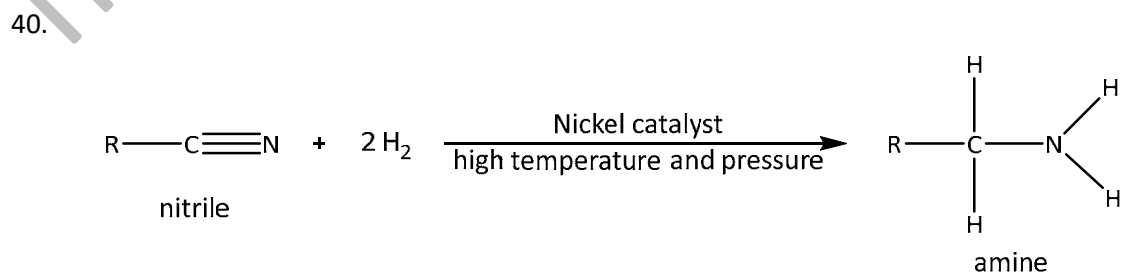
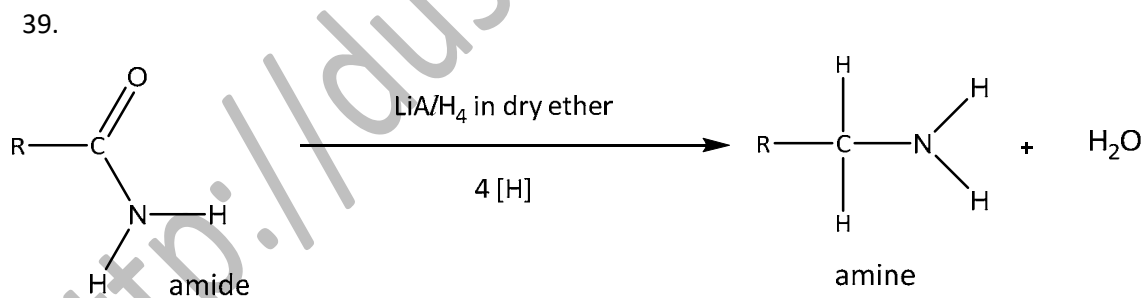
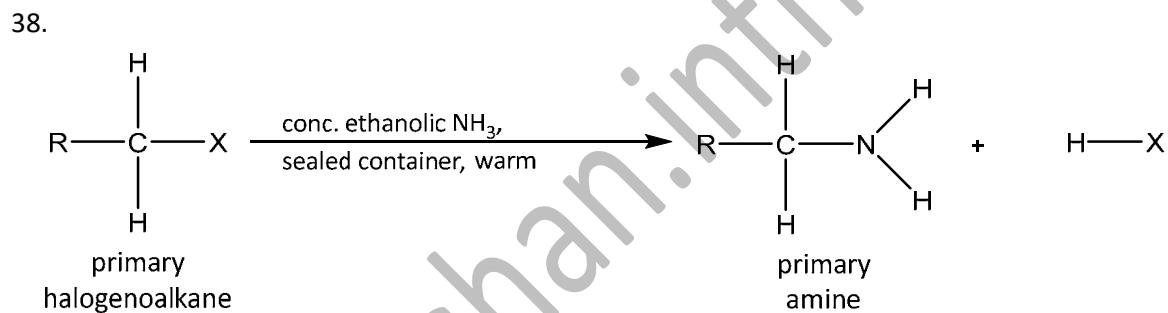
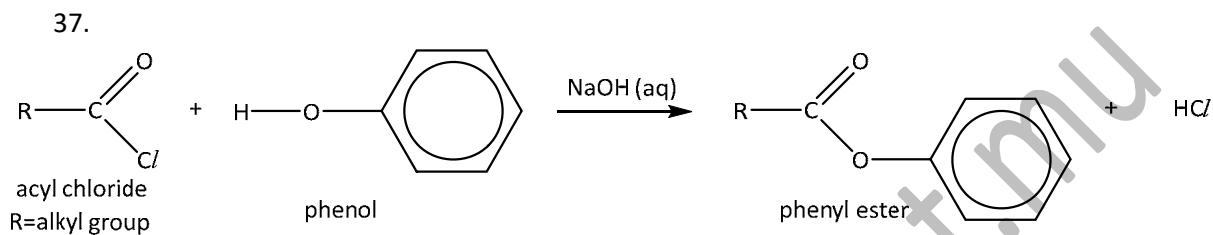
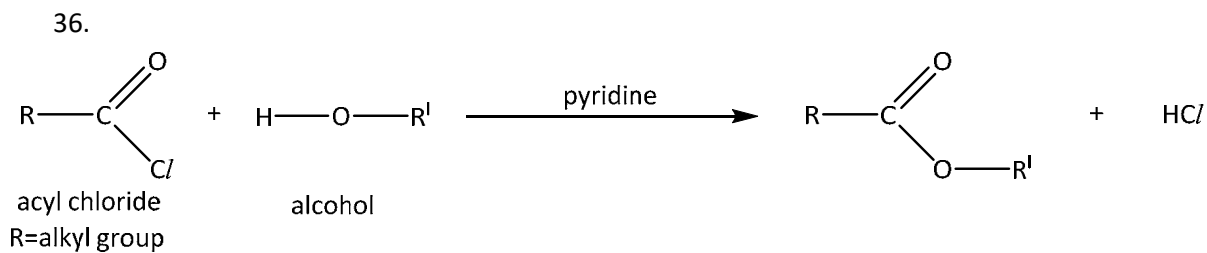


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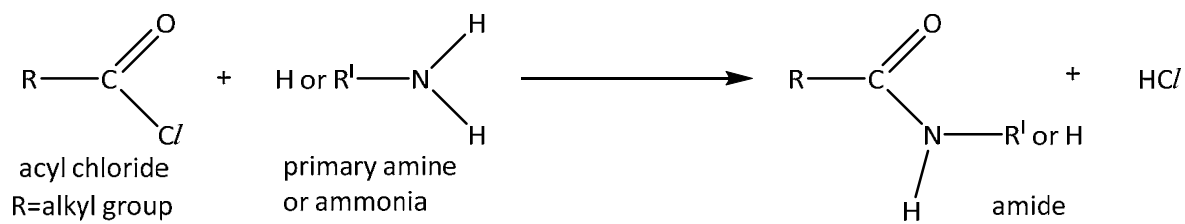


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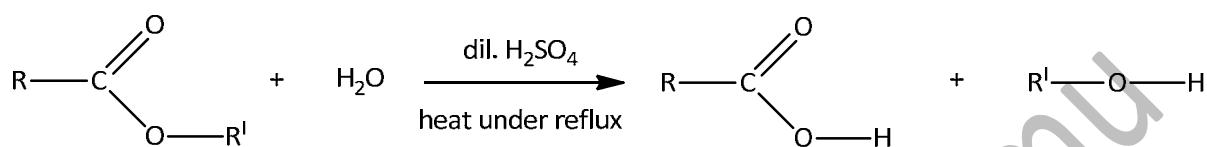




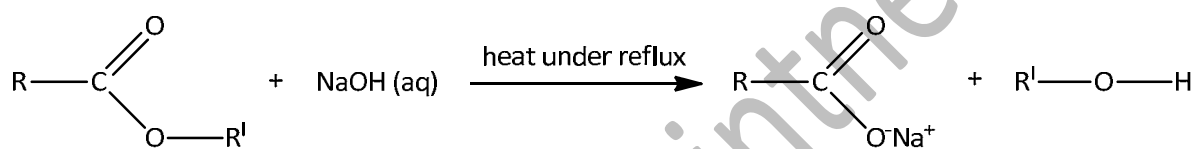
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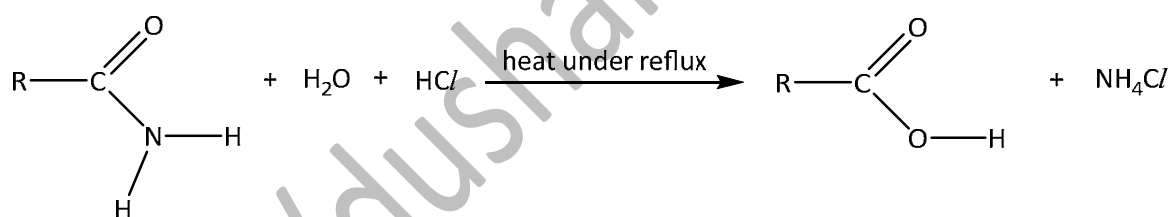
42.



43.



44.



45.

