Complete the following reactions. Circle the most favored products.

1.
$$H_2/Ni$$
 Δ

$$3.$$
 \searrow NH \downarrow + H_2O \Longrightarrow

5.
$$+ H_2O + NaOH \rightarrow$$

6.
$$+ \longrightarrow_{NH_2}$$
 $\xrightarrow{[-H_2O]}$

7.
$$\downarrow$$
 H₂O \Longrightarrow

8.
$$_{\rm HN}^{\circ}$$
 + HCI + H $_{\rm 2}$ O \longrightarrow

9.
$$\longrightarrow$$
 + \longrightarrow NH₂ \longrightarrow [-H₂O]

$$10. \hspace{1cm} \begin{array}{c} \hspace{0.5cm} \text{NH} \\ \end{array} \hspace{0.5cm} + \hspace{0.5cm} \text{H}_2 \hspace{0.5cm} \hspace{0.5cm} \hspace{0.5cm} \longleftrightarrow \hspace{0.5cm} \hspace{0.5cm}$$

11.
$$OH + OH OH OH$$

12.
$$\downarrow 0$$
 + $\downarrow 0$ $[-H_2O]$

13.
$$N \xrightarrow{H_2/Ni} \Delta$$

14.
$$\uparrow \uparrow 0$$
 + NH₃ $[-H_2O]$

15.
$$N$$
 H_2/Ni Δ

16.
$$\downarrow 0$$
 H_2/Ni Δ

18.
$$+ H_2O$$
 [H⁺]

19.
$$-$$
N $+$ HCI \longrightarrow

22.
$$^{\circ}$$
 + HCI + H $_2$ O \rightarrow

^{23.}
N
 + 2 H₂O + HCl \rightarrow

Question 1:
$$\begin{array}{c} H_2/Ni \\ NH_2 \\ \end{array}$$
 $\begin{array}{c} H_2/Ni \\ \end{array}$ $\begin{array}{c} NH_2 \\ \end{array}$ \\ \end{array}$ \begin{array}

Question 12:
$$\downarrow^{\circ}_{OH}$$
 + \downarrow°_{OH} $\xrightarrow{[-H_2O]}$ \circ \uparrow° + \downarrow°_{2} \bullet

Question 13:
$$N \longrightarrow H_2/Ni$$
 $\Delta \longrightarrow NH_2$

Question 15:
$$\begin{array}{c} N \\ H_2/Ni \\ \Delta \end{array}$$
 \rightarrow NH_2

Question 16:
$$H_2/Ni$$
 Δ H_2O

Question 18:
$$+ H_2O$$
 $- H^+]$ OH $+ VOH$

Question 19:
$$-N$$
 + HCI \longrightarrow $-N^+$ H CI

CHE102 - Extra Practice - E3 - Exam 3 CA/Ester/Amines/Amides - S20 - Ver. 7

Question 25:
$$\longrightarrow$$
 + H_2O \longrightarrow \longrightarrow OH + \longrightarrow OH