Complete the following reactions. Circle the most favored products.

1.
$$\bigcirc$$
OH + \bigcirc OH $\underbrace{[H_2O]}$

$$2. \hspace{1cm} \bigcirc \hspace{1cm} + \hspace{1cm} \bigcirc \hspace{1cm} \hspace{1cm} \underline{\hspace{1cm} \hspace{1cm} \hspace{1cm}\hspace{1cm}\hspace{1cm}\hspace{1cm}\hspace{1cm}\hspace{1cm}\hspace{1cm} \hspace{1cm} \hspace{1cm} \hspace{1cm} \hspace{1cm}\hspace{1cm} \hspace{1cm} \hspace{1cm} \hspace{1$$

3.
$$(-H_2O)$$

$$4. \qquad \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \end{array}$$

$$8. \quad \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \end{array}$$

$$10.$$
 OH $+$ OH $[H_2O]$

12.
$$+ 2 Cu^{+2}_{(aq)} + NaOH$$
 [0]

13.
$$\longrightarrow$$
 OH \longrightarrow OH \longrightarrow \longrightarrow OH \longrightarrow \longrightarrow OH

14.
$$\bigcirc$$
OH \bigcirc [0]

15.
$$\longrightarrow$$
 + \longrightarrow \longrightarrow \longrightarrow

18.
$$\bigcirc$$
 + \bigcirc OH \bigcirc \bigcirc

20. + 2
$$Ag^+_{(aq)}$$
 + $NH_{3(aq)}$ \bigcirc

$$21. \xrightarrow{\text{OH}} \xrightarrow{\text{[o]}}$$

$$22. \qquad \text{OH} \qquad \xrightarrow{[K_2 C r_2 O_7/H_2 S O_4]} \Delta,$$

$$23. \qquad \qquad + - \text{OH} \qquad \underbrace{ \left[\text{dry HCI} \right] }$$

Question 1:
$$+ H_2O$$

Question 4:
$$+ H_2O$$

Question 5:
$$\underline{\hspace{0.2cm}}$$
 CO₂ (g) + $\underline{\hspace{0.2cm}}$ H₂O (g) + Heat Balance: $(1,10,7,7)$

Question 6:
$$+ H_2O$$
 Rate: Very Slow

Question 7:
$$__{CO_2(g)+}$$
 $_{H_2O(g)+Heat}$ Balance: $(2,9,6,8)$

Question 8:
$$+ H_2O$$

Question 11:
$$+ H_2O$$

Question 12:
$$+Cu_2O_{(s)} + H_2O$$
 Visible Change: clear blue \longrightarrow brick-red

ppt

Question 13:
$$+ H_2O$$

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Question 20:
$$^{\mathring{\text{NH}},\mathring{\text{O}}}$$
 +2 Ag $_{\{s\}}$ Visible Change: clear \longrightarrow Silver Mirror

${\rm Question} \ 21: \ \ \mbox{No Reaction}$

Question 23:
$$\longrightarrow$$
 $+$ H_2O