Complete the following reactions. Circle the most favored products.

$$3. \quad \stackrel{\mathsf{OH}}{\longleftarrow} \quad \stackrel{\mathsf{500\,K}}{\longrightarrow} \quad$$

6.
$$+ H_2O \rightarrow$$

8.
$$+ H_2O \rightarrow$$

$$10. \text{ CH}_{4} + \text{ CI}_{2} \longrightarrow$$

$$^{11.}$$
 $^+$ HCI \longrightarrow

12.
$$+ H_2O \longrightarrow$$

15.
$$+ H_2O \rightarrow$$

$$18.$$
 \leftarrow $+$ Cl_2 \longrightarrow

$$19. \hspace{1cm} \text{OH} \hspace{1cm} \frac{500 \, \text{K}}{\Delta}$$

20.
$$+ H_2O \longrightarrow$$

22.
$$+ H_2O \rightarrow$$

Question 6:
$$H_2$$
 (g) $+$ $+$ OH $+$ OH $+$ OH $+$ OH $+$ OH

Question 7:
$$_{co_2(g)+}$$
 $_{H_2O(g)+Heat}$ Balance: $(2,21,14,14)$

Question 8:
$$H_2(g)$$
 + \downarrow on + \downarrow

Question 9:
$$__{CO_2}$$
 (g) + $__{H_2O}$ (g) + Heat Balance: $(2,5,4,2)$

Question 11:
$$H_2(g)$$
 + \downarrow CI + \downarrow CI

Question 12:
$$H_2(g)$$
 + OH

Question 14:
$$_{--}$$
 co₂ (g) + $_{--}$ H₂O (g) + Heat Balance: $(1,7,5,4)$

Question 15:
$$H_2(g)$$
 + OH + OH

CHE102 - Extra Practice - C19 - Alkanes - S18 - Ver. 6

Question 17:
$$__{CO_2}$$
 (g) + $___$ H₂O (g) + Heat Balance: $(2,19,12,14)$

Question 20:
$$H_2(g)$$
 + \downarrow OH + \downarrow OH

$$\label{eq:Question 21: Lagrangian} \begin{tabular}{ll} Question \ 21: \ __CO_2 \ (g) + __H_2O \ (g) + Heat \ Balance: \ (2,17,12,10) \end{tabular}$$