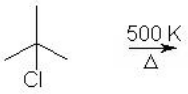
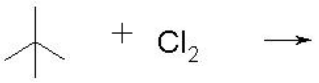
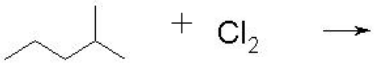
Complete the following reactions. Circle the most favored products.

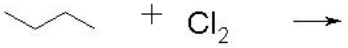
1.  $\xrightarrow[\Delta]{500\,K}$

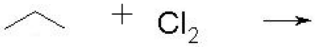
2. 

3. 

4. CH_4 $\xrightarrow[\Delta]{500\,K}$

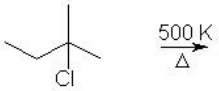
5. 

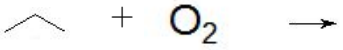
6. 

7. 

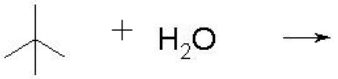
8.  $\xrightarrow[\Delta]{500\,K}$

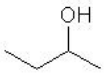
9. 

10.  $\xrightarrow[\Delta]{500\,K}$

11. 

12. 

13. 

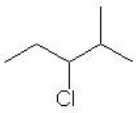
14. 

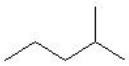
15.  + HCl →

16.  + O_2 →

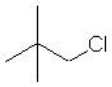
17.  + HCl →

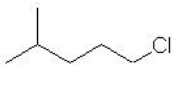
18.  + H_2O →

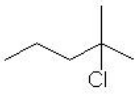
19. 

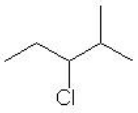
20.  + HCl →

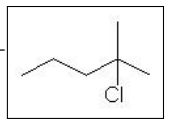
Question 1:  + HCl

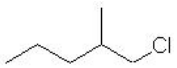
Question 2: HCl + 

Question 3: HCl + 

+ 

+ 

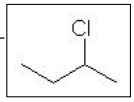
+ 

+ 

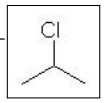
Question 4: No Reaction

Question 5: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (2,19,12,14)

Question 6: HCl +

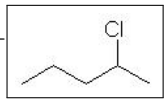
+ 

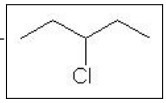
Question 7: HCl + 

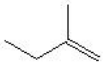
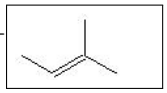
+ 

Question 8:  + H_2 (g)

Question 9: HCl + 

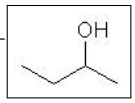
+ 

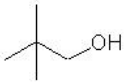
+ 

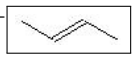
Question 10:  +  + HCl

Question 11: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (1,5,3,4)

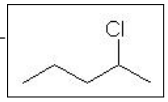
Question 12: H_2 (g) + 

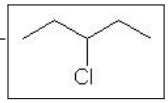
+ 

Question 13: H_2 (g) + 

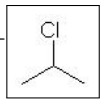
Question 14:  +  + H_2O

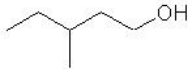
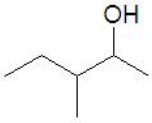
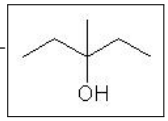
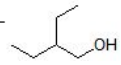
Question 15: H_2 (g) + 

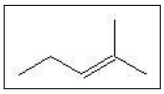
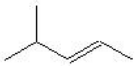
+ 

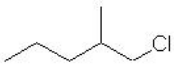
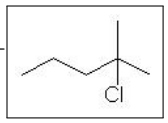
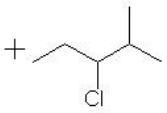
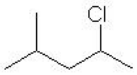
+ 

Question 16: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (1,7,5,4)

Question 17: $H_2\,(g)$ +  + 

Question 18: $H_2\,(g)$ +  +  +  + 

Question 19:  +  + HCl

Question 20: $H_2\,(g)$ +  +  +  +  +