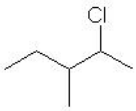
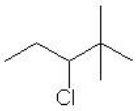
Complete the following reactions. Circle the most favored products.

1.

2. + O_2 →

3. + HCl →

4. 

5. 

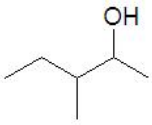
6. + H_2O →

7. CH_4 + HCl →

8. CH_4 + O_2 →

9. + O_2 →

10. + HCl →

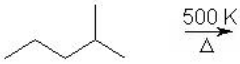
11. 

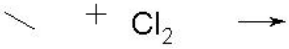
12. + O_2 →

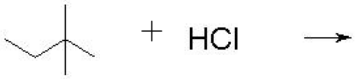
13.

14.

15.

16. 

17. 

18. 

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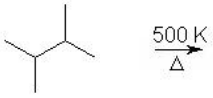
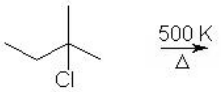
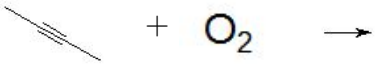
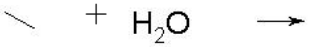
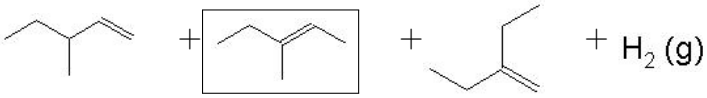
20. 

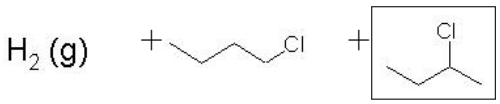
21. 

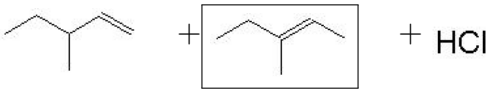
22. 

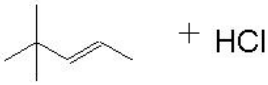
23. 

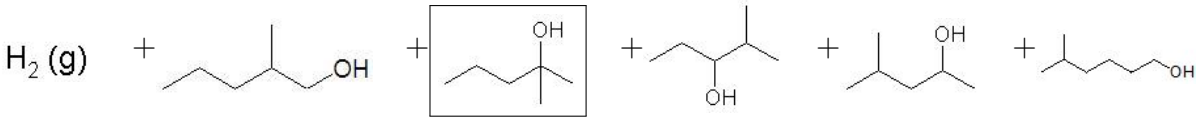
Question 1: 

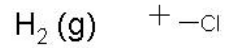
Question 2: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (2,7,4,6)

Question 3: 

Question 4: 

Question 5: 

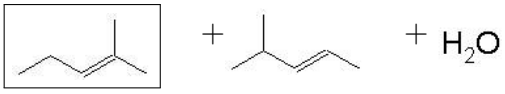
Question 6: 

Question 7: 

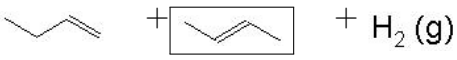
Question 8: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (1,2,1,2)

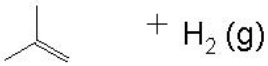
Question 9: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (1,4,3,2)

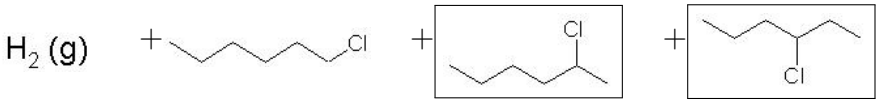
Question 10:

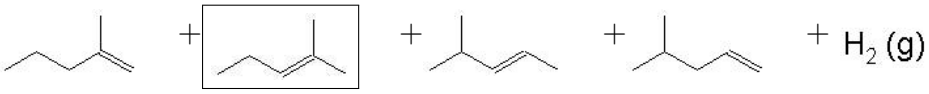
Question 11: 

Question 12: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (1,6,4,4)

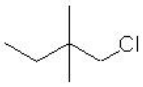
Question 13: 

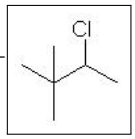
Question 14: 

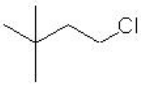
Question 15: 

Question 16: 

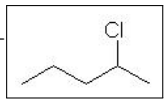
Question 17: HCl +

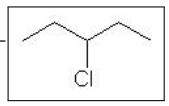
Question 18: H_2 (g) + 

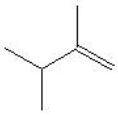
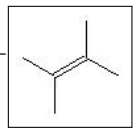
+ 

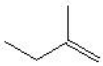
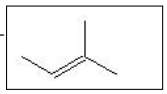
+ 

Question 19: HCl +

+ 

+ 

Question 20: 
+ 
+ H_2 (g)

Question 21: 
+ 
+ HCl

Question 22: ___ CO_2 (g) + ___ H_2O (g) + Heat Balance: (2,11,8,6)

Question 23: H_2 (g) +