2013

1. C
2. A
3. B
4. D
5. B
6. D
7. A
8. B
9. C
10. C
11. Use $P_1/T_1 = P_2/T_2$; P = 88.8 kPa, so yes, it is in the allowable range
12. P of CO_2 = 6.8 X 10^3 kPa
    P of H_2 = 1.4 X 10^4 kPa
13. 14. 1 L
14. -1298 kJ
15. 34 kJ
16. 5.0 X 10^1 ^oC
17. -420 kJ/mole
18. 36 kJ
19. A) 3
    B) 2
    C) 100kJ/mole
    D) -25

20. A) add catalyst
    B) low temperature

21. Exothermic, as K increased, temperature decreased
22. a) no effect
    b) increase B_2O_3
    c) increase temp
    d) no effect

23. a) 4.6 X 104
    b) C

24. $HClO_2$ Ka = 1.1 X 10^{-2}
25. 4.74 g/L