1. 82.69%
2. 46g
91.3%
3. 0.05
4. Needs a 4 to 5 ratio but only 2 mols of ammonia available and one mole of oxygen. Oxygen is limiting.
5. 1 mole CaCO3 produces 1 mole CO2(g)

 100g CaCO3 ------------ 44g CO2(g)

 10g CaCO3 ------------ 10 x 44

 100

 = 4.4 g CO2(g)

1. FORWARD REACTION FAVOURED
FORWARD REACTION FAVOURED
REVERSE REACTION FAVOURED
2. C) a = b + c – d
3. ΔH = total bonds broken + total bonds made = 675 + (-856)

= -181kJmol-1

1. 29kJ
2. oxidation: reduction:
3. MnO4- + 8H+ + 5Fe2+ 🡪 Mn2+ + 5Fe3+ + 4H2O
4. The reaction must proceed according to a definite chemical equation with NO SIDE REACTIONS.

The reaction should have a very large equilibrium constant.

There must be some method of detecting the equivalence point – an indicator.

The reaction should be rapid!

1. a) none
 b) horse C