Equilibrium – Exam-Style Questions

- 1. What does the ≠ symbol represent?
- 2. Consider the reaction below

$$2SO_{2(g)} + O_{2(g)} \rightleftharpoons 2SO_{3(g)}$$
 $\Delta H = -196 \text{ kJ/mol}$

a. State and explain what would happen to the position of equilibrium if the temperature were increased.

b. State and explain what would happen to the position of equilibrium if the pressure were decreased.

3. The reaction below is used to produce ammonia, NH₃. State and explain the conditions required to produce the highest yield of NH₃

$$N_{2(g)} + 3H_{2(g)} \Rightarrow 2NH_{3(g)} \qquad \Delta H = -92 \text{ kJ/mol}$$