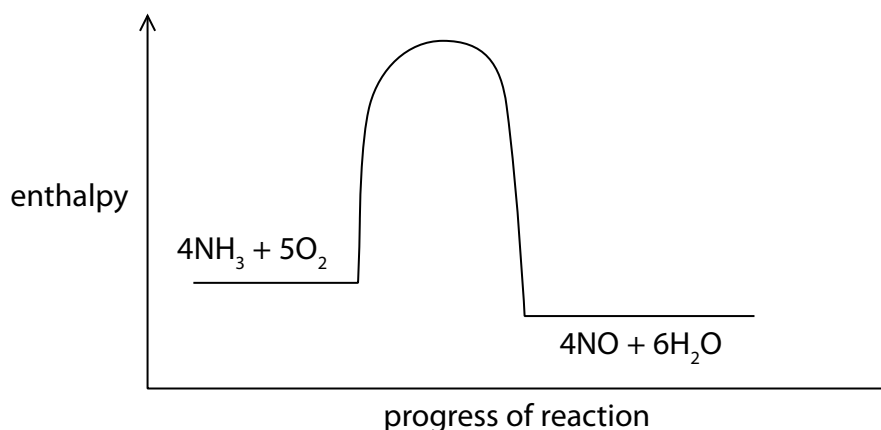


(b) When this reaction is used in industry, the catalyst is an alloy of platinum and rhodium.
The diagram shows the reaction profile for the uncatalysed reaction.



(i) On the diagram, draw the reaction profile for the catalysed reaction. (1)

(ii) Label the diagram to show

- the enthalpy change, $\Delta_r H$
- the activation energy, E_a

for the catalysed reaction.

(2)

(c) Write the expression for the equilibrium constant, K_c , for this reaction. (1)

(Total for Question 3 = 10 marks)