**2.3.2 Exercise 1 - CATALYSTS**

1. What is a catalyst?
2. Explain how a catalyst can save money and reduce the environmental impact of industrial processes.
3. What is an enzyme? Give two reasons why enzymes are such effective catalysts.
4. State three important industrial uses of catalyst
5. Draw an enthalpy profile diagram for a simple exothermic reaction. Label clearly the enthalpy change and the activation energy.
6. On the same diagram, show how the enthalpy profile for the reaction would change if a catalyst was used, and hence explain how a catalyst increases the rate of reaction.
7. Sketch a Maxwell-Boltzmann distribution of molecular energies. Add an activation energy and shade the area representing the number of molecules with enough energy to react.
8. Use the graph to explain how a catalyst increase the rate of reaction.