Kinetics - Questions by Topic

Q1.

Magnesium metal reacts with hydrochloric acid. Which change in condition would have no effect on the initial rate of this reaction?

(1)

☒ **A** an increase in the volume of acid solution

☒ **B** a decrease in the temperature of the acid solution

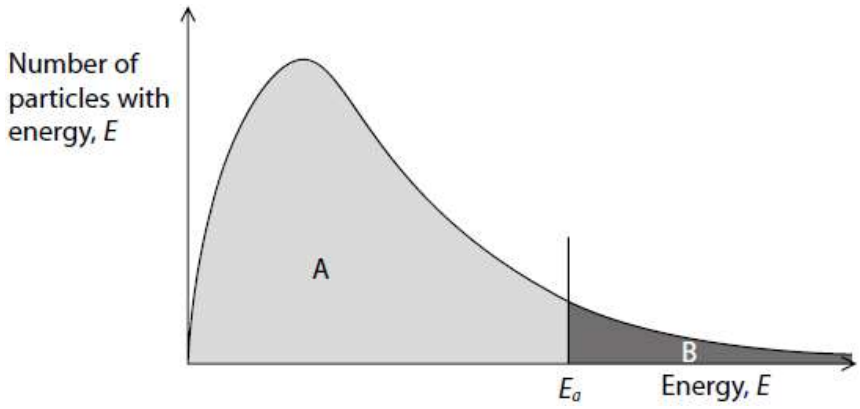
☒ **C** an increase in the surface area of the magnesium

☒ **D** a decrease in the concentration of the acid solution

(Total for question = 1 mark)

Q2.

The diagram shows the general shape of a Maxwell-Boltzmann distribution curve for the particles present in a reaction mixture.



(a) How does the peak change when the temperature of the reaction mixture is decreased?

(1)

	Peak position	Peak height
☐ **A**	shifted left	higher
☐ **B**	shifted right	higher
☐ **C**	shifted left	lower
☐ **D**	shifted right	lower

(b) The activation energy of an uncatalysed reaction is represented by the vertical line, E_a, on the horizontal axis. The shaded areas A and B are the areas under the curve on either side of the line E_a.

How do the two shaded areas change, if at all, when a catalyst is added?

(1)

	Area A	Area B
☐ **A**	increases	decreases
☐ **B**	decreases	increases
☐ **C**	no change	no change
☐ **D**	increases	increases

(Total for question = 2 marks)