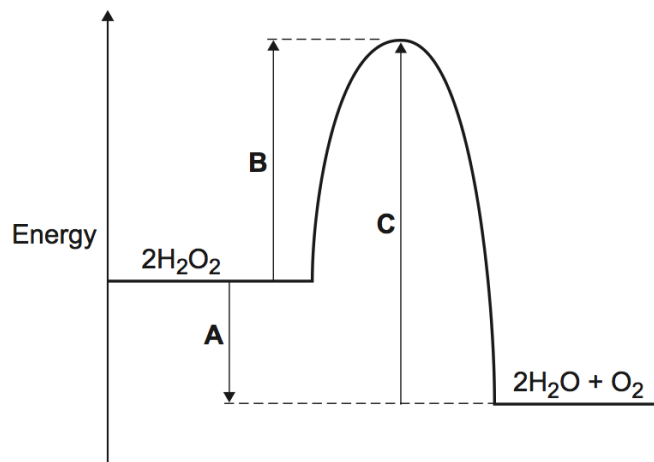


0 1

The energy level diagram for the decomposition of hydrogen peroxide into water and oxygen is shown below:



0 1

1

Which letter represents activation energy?

[1 mark]

.....

0 1

2

Explain, in terms of energy, how a catalyst can make the reaction happen more quickly.

[2 marks]

.....

.....

.....

0 2

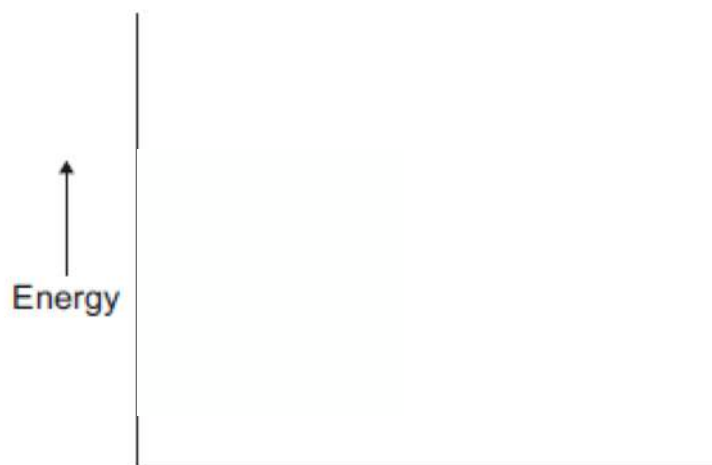
In the presence of water, citric acid ($C_6H_8O_7$) and sodium bicarbonate ($NaHCO_3$) react to form sodium citrate ($Na_3C_6H_5O_7$), water, and carbon dioxide (CO_2) in an endothermic reaction.

0 2

1

On the axes below, draw the reaction profile diagram for this reaction, and clearly label the activation energy.

[3 marks]



(Total 6 marks)

End