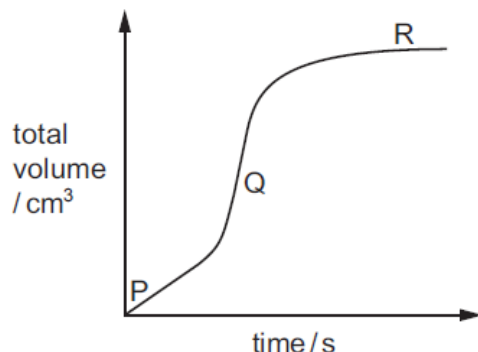


1. Nov/2022/Paper_11/No.15

A large excess of magnesium ribbon is added to dilute hydrochloric acid and the volume of hydrogen gas produced is measured as the reaction proceeds. The reaction is exothermic.

The results are shown.



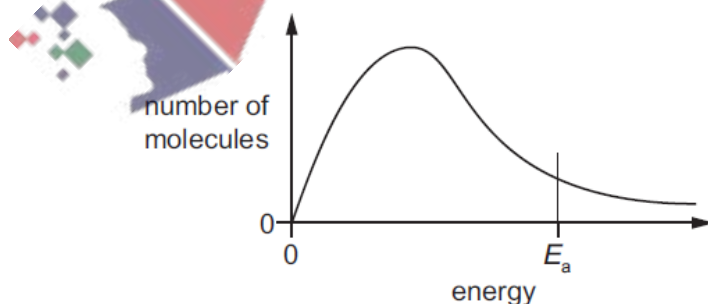
Which row explains the changes in the rate of reaction between points P and Q and between points Q and R?

	between points P and Q	between points Q and R
A	the reaction temperature is increasing	the acid concentration is falling
B	the reaction temperature is increasing	the magnesium has been used up
C	magnesium's surface area is decreasing	the acid concentration is falling
D	magnesium's surface area is decreasing	the magnesium has been used up

2. Nov/2022/Paper_11/No.16

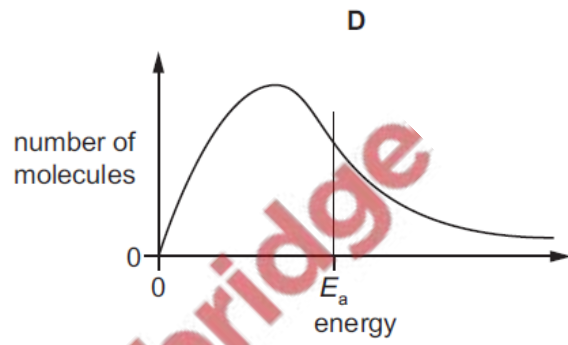
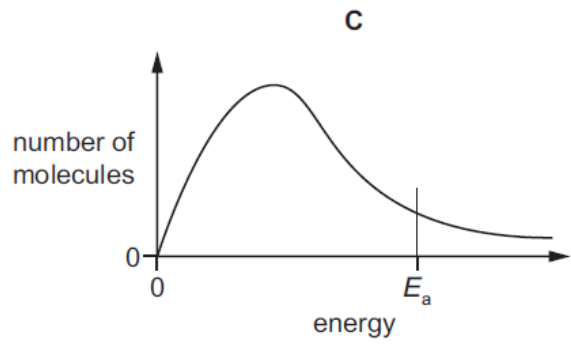
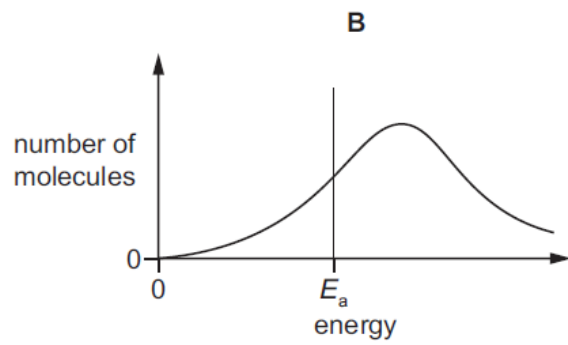
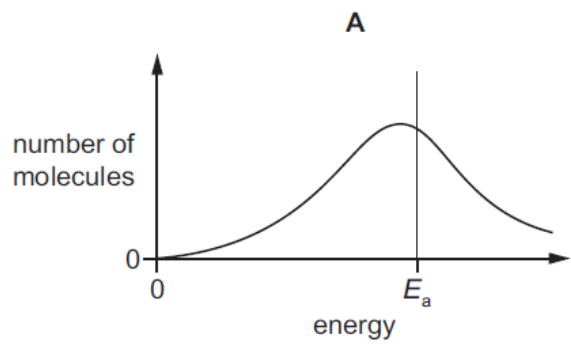
Measurements are made to determine the activation energy, E_a , of a reaction.

The diagram shows E_a on the Boltzmann distribution at temperature T_1 .



Measurements are then made at a higher temperature, T_2 .

Which diagram correctly shows the Boltzmann distribution and E_a at T_2 ?



PapaCambridge