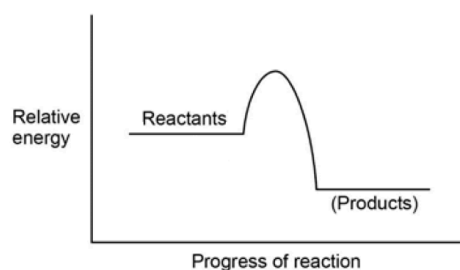


Reaction profiles

Q1. (2018)

02.3



ignore labels

any curve / line going up and then down

products line below reactants

allow curve to start / finish anywhere along reactant / product lines

AO1
5.5.1.2

1

1

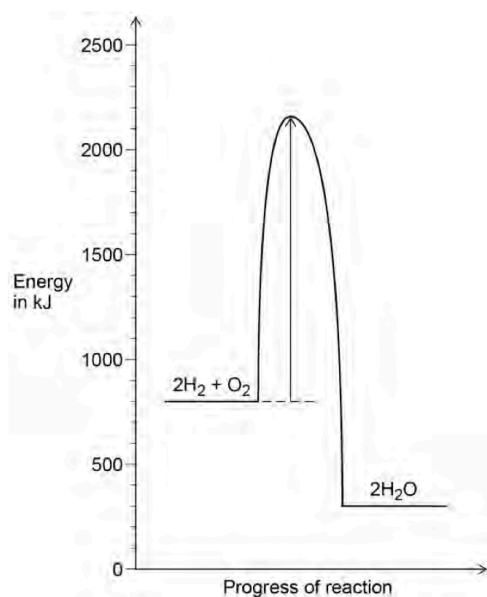
Q2. (2019)

A)

03.1

line from reactants to top of curve (i.e. from 800 to 2160)

1

AO1
5.5.1.2

ignore arrowheads

B)

03.2

reads levels of reactants (800 kJ) and products (300 kJ)

 $(800 - 300) = 500 \text{ (kJ)}$ an answer of $(-)$ 500 (kJ)
scores **2** marks
ignore sign

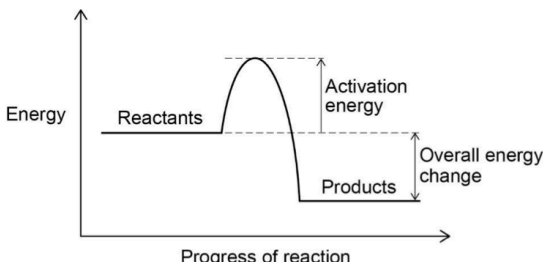
allow correct subtraction of one incorrect value determined for the energy change

AO2
AO3
5.5.1.2

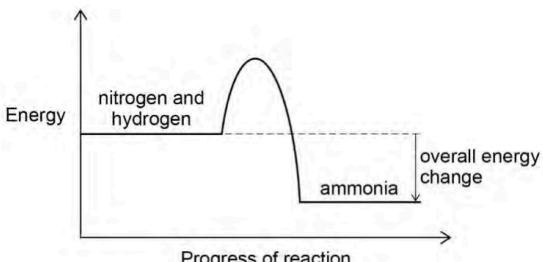
1

1

Q3. (2021)

03.4	labelled horizontal lines for reactants and products, with the product line below the level of the reactant line		1	AO1 5.5.1.2	
	reaction pathway	allow curve to start / finish anywhere along reactant / product lines	1		
	line from reactants to maximum labelled activation energy		1		
	line from reactants to products labelled overall energy change		1		
the diagram below scores 4 marks					
					

Q4. (2024)

05.4	correct shape for exothermic reaction with the product line below the level of the reactants line		1	AO2
	labelled horizontal lines for reactants and product	labelled horizontal lines for nitrogen and hydrogen and ammonia	1	AO1
	labelled overall energy change		1	AO1
5.5.1.2				
an answer of				
				
scores 3 marks				