

GCSE Chemistry A (Gateway Science)

J248/01 Chemistry A C1-C3 and C7 (Foundation Tier)

Question Set 14

1 A student investigates the energy changes during some chemical reactions.

She measures the temperature at the start and end of each reaction.

Look at her results.

Reaction	Temperature at start (°C)	Temperature at end (°C)	Temperature change (°C)	Type of reaction
A	20	25	+5	Exothermic
B	18	10	-8	endothermic
C	21	35	+14	exothermic
D	20	20	0	No reaction

(a) Complete the table.

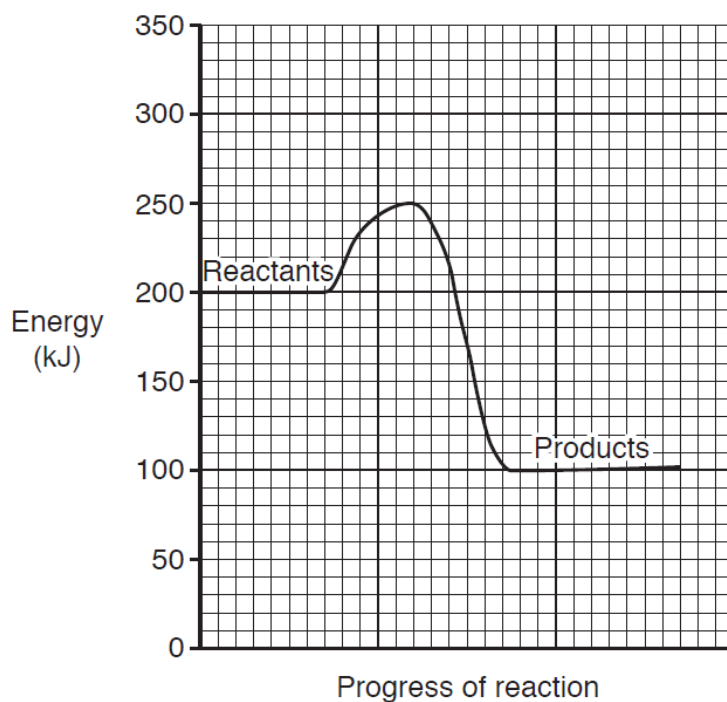
[3]

(b) Which reaction has the largest energy change?

greatest temperature change

Answer = C [1]

(c) Look at the reaction profile for reaction A.



(i) Calculate the energy change in this reaction.

$$200 - 100 = 100$$

Answer =¹⁰⁰..... kJ [1]

(ii) Calculate the activation energy.

$$250 - 200 = 50$$

Answer =⁵⁰..... kJ [1]

Total Marks for Question Set 14: 6



Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge