OCR
Oxford Cambridge and RSA

GCE

Chemistry B

H433/01: Fundamentals of chemistry

A Level

Mark Scheme for June 2023

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

MARKING INSTRUCTIONS

PREPARATION FOR MARKING
RM ASSESSOR

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: *RM Assessor Assessor Online Training*; *OCR Essential Guide to Marking*.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3. Log-in to RM Assessor and mark the **required number** of practice responses ("scripts") and the **number of required** standardisation responses.

   YOU MUST MARK 10 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the RM Assessor 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the RM Assessor messaging system, or by email.

5. **Crossed Out Responses**
   Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

   Rubric Error Responses – Optional Questions
   Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM assessor, which will select the

highest mark from those awarded. *(The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)*

Multiple Choice Question Responses
When a multiple choice question has only a single, correct response and a candidate provides two responses (even if one of these responses is correct), then no mark should be awarded (as it is not possible to determine which was the first response selected by the candidate).
When a question requires candidates to select more than one option/multiple options, then local marking arrangements need to ensure consistency of approach.

Contradictory Responses
When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only **one mark per response**)
Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

Short Answer Questions (requiring a more developed response, worth **two or more marks**)
If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Longer Answer Questions (requiring a developed response)
Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there, then add a tick to confirm that the work has been seen.

7. Award No Response (NR) if:
    - there is nothing written in the answer space

Award Zero '0' if:

- anything is written in the answer space and is not worthy of credit (this includes text and symbols).

Team Leaders must confirm the correct use of the NR button with their markers before live marking commences and should check this when reviewing scripts.

8. The RM Assessor **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**
If you have any questions or comments for your team leader, use the phone, the RM Assessor messaging system, or e-mail.

9. Assistant Examiners will send a brief report on the performance of candidates to their Team Leader (Supervisor) via email by the end of the marking period. The report should contain notes on particular strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

1. For answers marked by levels of response:

Read through the whole answer from start to finish, using the Level descriptors to help you decide whether it is a strong or weak answer. The indicative scientific content in the Guidance column indicates the expected parameters for candidates' answers, but be prepared to recognise and credit unexpected approaches where they show relevance. Using a 'best-fit' approach based on the skills and science content evidenced within the answer, first decide which set of level descriptors, Level 1, Level 2 or Level 3, best describes the overall quality of the answer.

Once the level is located, award the higher or lower mark:

The higher mark should be awarded where the level descriptor has been evidenced and all aspects of the communication statement (in italics) have been met.

The lower mark should be awarded where the level descriptor has been evidenced but aspects of the communication statement (in italics) are missing.

In summary:

The skills and science content determines the level.

The communication statement determines the mark within a level.

Level of response questions on this paper are **34c** and **35f**

The only annotation on a level of response question should be the indication of the level.

A level annotation should be used where all marks for a level have been achieved.
e.g. if a candidate has 6 marks, they would have this annotation on their script:

L3

If a candidate has achieved 5 marks then they have reached Level 3 but will not have met the communication statement.
They should have the following annotations on their scripts:

L3 ^

The same principle should be applied to Level 2 and Level 1.

No marks (0) should have a cross: 

Place the annotations alongside the mark for the question.

On additional pages, annotate using SEEN

10. **Annotations**

Annotation	Meaning
	Correct response
	Incorrect response
	Omission mark
	Benefit of doubt given
	Contradiction
	Rounding error
	Error in number of significant figures
	Error carried forward
	Level 1
	Level 2
	Level 3
	Benefit of doubt not given
	Noted but no credit given

Annotation	Meaning
I	Ignore
BP	Blank page

11. **Subject Specific Marking Instructions**

Abbreviations, annotations and conventions used in the detailed Mark Scheme (to include abbreviations and subject-specific conventions).

Annotation	Meaning
I	alternative and acceptable answers for the same marking point
✓	Separates marking points
DO NOT ALLOW	Answers which are not worthy of credit
CON	Contradiction
IGNORE	Statements which are irrelevant
ALLOW	Answers that can be accepted
( )	Words which are not essential to gain credit
__	Underlined words must be present in answer to score a mark
ECF	Error carried forward
AW	Alternative wording
ORA	Or reverse argument

13. **Subject-specific Marking Instructions**

INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:

- the specification, especially the assessment objectives
- the question paper
- the mark scheme.

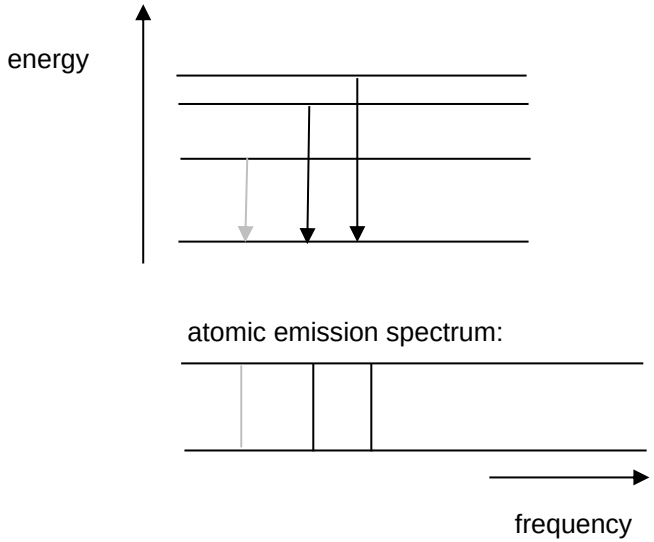
You should ensure that you have copies of these materials.

You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet **Instructions for Examiners**. If you are examining for the first time, please read carefully **Appendix 5 Introduction to Script Marking: Notes for New Examiners**.

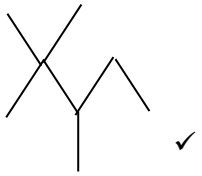
Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.

Multiple Choice answers

Question	Key	AO
1	D	1.1
2	D	1.1
3	C	1.1
4	D	1.1
5	D	2.2
6	B	1.2
7	D	2.2
8	C	1.2
9	A	2.1
10	A	1.1
11	C	1.2
12	B	1.2
13	A	1.1
14	C	2.2
15	B	1.1
16	D	1.1
17	A	2.7
18	C	2.4
19	C	2.5
20	B	2.6
21	C	1.1
22	B	2.6
23	B	1.1
24	B	2.6
25	A	2.8
26	A	2.2
27	D	2.2
28	D	1.2
29	C	1.2
30	D	2.7

Question			Answer	Marks	AO Element	Guidance
31	(a)		**CHECK ANSWER LINE** **If answer is 87.71, award 2 marks** (84 x 0.56) + (86 x 9.86) + (87 x 7.00) + (88 x 82.58) /100 (47.04 + 847.96 + 609.00 + 7267.04)/100 = 8771.04 8771.04 / 100 ✓ = 87.71 ✓	**2**	**1.2 (x2)**	Expression Evaluation and sf
31	(b)		 two energy lines above **AND** lines getting closer together ✓ two downward arrows **AND** between 3→1 and 4→1 ✓ two lines in spectrum **AND** lines getting closer at higher frequency ✓	**3**	**1.1 (x3)**	Lines below CON mp1 Upward arrows CON mp2

Question			Answer	Mark	AO Element	Guidance
31	(c)		Strontium (nitrate) faint ppt/more slowly, barium (nitrate) fainter ppt/slower still **OR** A decreasing amount of white precipitate/cloudiness ✓ (Group 2) hydroxides become more soluble down the Group ✓	2	1.2 (x2)	Coloured ppt CON mp1
31	(d)	(i)	$CaCO_3(s) \rightarrow CaO(s) + CO_2(g)$ ✓	1	1.2	Equation **AND** state symbols
31	(d)	(ii)	Thermal stability (of carbonates) increases down the Group ✓ Group 2 ions increase in size down the group **ORA** ✓ The carbonate ion is less polarised/distorted **AND** more stable/less easily broken down **ORA**✓	3	1.1 2.1 (x2)	**ALLOW** charge density decreases down the group
31	(e)		$Ba^{2+}(aq) + SO_4^{2-}(aq) \rightarrow BaSO_4(s)$ Equation ✓ State symbols ✓	2	1.2 (x2)	Mp2 dependent on mp1
			Total	13		

Question			Answer	Mark	AO Element	Guidance
32	(a)		$C_8H_{18} + 8½O_2 \rightarrow 8CO + 9H_2O$ ✓	1	1.2	**IGNORE** state symbols **ALLOW** 2, 17, 16, 18 as an alternative for balancing
32	(b)		 ✓	1	1.1	
32	(c)	(i)	**CHECK ANSWER LINE** **If answer = -625 (kJ mol^{-1}) award 3 marks** ($q = mc\Delta T$) q = 250 x 4.18 x 35.5 = 37097.5 J ✓ n = 2.73 / 46 = 5.93478 x 10^{-2} mol ✓ Δ_cH = -(37097.5 / 5.93478 x 10^{-2}) / 1000 = - 625 (kJ mol^{-1}) ✓	3	2.4 (x3)	**ALLOW** 2 or more sf **ALLOW** ECF (+)625 (kJmol^{-1}) scores 2

Question			Answer	Mark	AO Element	Guidance
32	(c)	(ii)	Any two errors identified with appropriate correction Error 1: heat transferred/'lost' (to surroundings) ✓ Correction 1: use a draft shield/lagging/lid ✓ Error 2: evaporation (of ethanol) from spirit burner ✓ Correction 2: put a cap/lid on burner (when not burning)/ weigh burner immediately it is blown out ✓ Error 3: uneven distribution of heat / not recorded highest temperature reached Correction 3: stir water	4	3.4 (x4)	Use of polystyrene cup **CON** correction 1 **ALLOW** Error: evaporation of (hot) water from can Correction: cover (can) with a lid Ignore incomplete combustion
32	(d)	(i)	(bond enthalpies/they are averaged) over different molecules that contain that bond **AW** ✓	1	1.1	Ignore compound
32	(d)	(ii)	Double bonds have four electrons/ two pairs **AND** Single bonds have only two electrons/ one pair ✓ There is a greater force of attraction between the shared electrons and the bonded nuclei in the double bond ✓	2	2.1 (x2)	Not just more electrons **ORA** in terms of repulsion

Question			Answer	Mark	AO Element	Guidance
32	(d)	(iii)	**CHECK ANSWER LINE** **If answer = (+) 395 (kJ mol^{-1}) award 3 marks** [(C-C) + (C-O) + (O-H) + (5(C-H) + 3(O=O)]/ [347 + 358 + 464 + 5(C-H) + 3(498)] = 2663 + 5(C-H) **AND** [4(C=O) + 6(O-H)]) / [4(805) + 6(464)] = 6004 ✓ -1367 = [2663 + 5(C-H)] – 6004 ✓ -1367 + 6004 - 2663 = 5(C-H) C-H = 1974 / 5 = (+) 395 (kJ mol^{-1}) ✓	3	2.6 (x3)	**ALLOW** ECF Mp1 correct evaluation of bonds broken and bonds made Mp2 expression using $\Delta_c H$ / -1367 Correct evaluation using appropriate data from question
32	(e)		CO_2 emitted during combustion is balanced by CO_2 taken in during photosynthesis/growth **AW** ✓ Fossil fuel energy might be used to produce/ transport fuel/ crops ✓ These produce CO_2 ✓	3	3.2 (x 3)	ALLOW fermentation/ anaerobic respiration of crops
			Total	18		

Question			Answer	Mark	AO Element	Guidance
33	(a)	(i)	**CHECK ANSWER LINE** **If answer = 80.3 (%) award 2 marks** M_r $C_3H_5O(COONa)_3$ = 258 ✓ (theoretical yield of sodium citrate = 4.80 / 192 x 258 = 6.45 g) % yield = 5.18 / 6.45 x 100 = 80.3 % ✓	2	2.4 (x2)	**ALLOW** 2 or more sf **ALLOW** ECF **ALLOW** amount citric acid = 4.8 / 192 = 0.025 (mol) amount sodium citrate = 5.18 / 258 = 0.0201 (mol) yield = 0.0201/0.025 =80.3 %
33	(a)	(ii)	**CHECK ANSWER LINE** **If answer = 0.288 (mol dm^{-3}) award 2 marks** $[H^+] = 10^{-13.46}$ = 3.47 x 10^{-14} (mol dm^{-3}) ✓ $[OH^-] = 10^{-14}$ / 3.47 x 10^{-14} = 2.88 x 10^{-1}/ 0.288 (mol dm^{-3}) ✓	2	2.2 (x2)	**ALLOW** 2 or more sf $[H^+]$ does not need to be shown as calculated separately
33	(b)	(i)	Brønsted-Lowry acid is H_2CO_3 **AND** Conjugate base is HCO_3^- ✓	1	1.1	

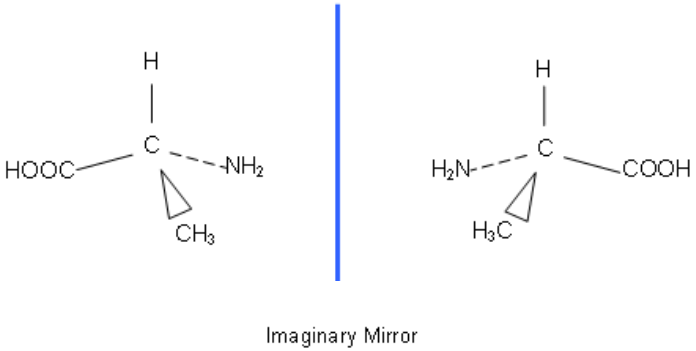
Question			Answer	Mark	AO Element	Guidance
33	(b)	(ii)	When acid is added/[H^+] increases, the position of <u>equilibrium</u> (33.2) shifts to the left/ side with H_2CO_3 ✓ When alkali is added/[OH^-] increases the OH^- reacts with/ removes H^+ ✓ The position of <u>equilibrium</u> (33.2) shifts to the right/ side with HCO_3^- ✓ (In both cases) pH remains constant / [H^+] does not change / change is counteracted because concentration of [HA] and [A^-] are both high/large ✓	4	2.5 (x4)	**Ignore** reference to HA and A^- **ALLOW** $H^+ + OH^- \rightarrow H_2O$

Question			Answer	Mark	AO Element	Guidance
33	(b)	(iii)	**CHECK ANSWER LINE** **If answer = 7.13 award 4 marks** $[H^+] = 10^{-7.40}$ $= 3.98 \times 10^{-8}$ (mol dm^{-3}) ✓ ($K_a = [H^+] [HCO_3^-] / [H_2CO_3]$) $= 3.98 \times 10^{-8} \times 11.3$ $= 4.50 \times 10^{-7}$ (mol dm^{-3}) ✓ $[H^+] = 10^{-7.20}$ $= 6.31 \times 10^{-8}$ (mol dm^{-3}) ✓ $4.5 \times 10^{-7} = 6.31 \times 10^{-8} [HCO_3^-] / [H_2CO_3]$ $[HCO_3^-] / [H_2CO_3] = 4.5 \times 10^{-7} / 6.31 \times 10^{-8}$ $= 7.13$✓	4	2.6 (x4)	**ALLOW** 2 or more sf Ignore units
			Total	13		

Question			Answer	Mark	AO Element	Guidance
34	(a)	(i)	Platinum / Pt electrode ✓ (both) 1.0 mol dm^{-3} Fe^{2+}/Fe^{3+} ✓ salt bridge **AND** wire connecting Pt and voltmeter ✓	3	3.3 (x3)	**ALLOW** description of salt bridge, e.g. filter paper strip soaked in saturated potassium nitrate Ensure no obvious breaks in the circuit
34	(a)	(ii)	= 1.53 (V) ✓	1	1.2	E^o_{cell} = (+0.77) – (-0.76) Ignore sign
34	(a)	(iii)	The wire – electrons ✓ The solutions – ions ✓	2	1.1 (x2)	Ignore types of ions
34	(b)		Zn/Zn^{2+} electrode potential / E^o value is more negative than that for Fe/Fe^{2+} so the zinc is oxidised/loses electrons more readily ✓ Fe/Fe^{2+} electrode potential / E^o value is more negative than that for Sn/Sn^{2+} so iron/Fe is oxidised/loses electrons more readily ✓ (therefore) zinc corrodes/ is oxidised/ iron is protected/ reduced / does not rust ✓	3	2.5 (x3)	**ALLOW** any clear indication of half-cell e.g. half cell 1, 2, 3 or Zn, Fe, Sn **ORA** throughout **ALLOW** iron corrodes/rusts with tin/Sn and not with zinc/Zn

34	**(c)***		Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. **Level 3 (5–6 marks)** Method fully explained with some fine detail points ***AND*** Calculation is correct with correct sf *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (3–4 marks)** Method explained in outline (most main points and some fine detail points) **AND** The calculation is progressed and partly correct. **OR** Method fully explained with most fine detail points **OR** Calculation is correct with correct sf *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* **Level 1 (1–2 marks)** Some method points and some attempt at calculation **OR** Most method points **OR** Some calculation points *There is an attempt at a logical structure with a line of reasoning. The information is in the most part relevant.* **0 marks** *No response or no response worthy of credit.*	**6**	**2.7 (x3)** **3.1 (x3)**	***Indicative scientific points include*** **Method** • pipette out 25 cm^3 Fe^{2+} into (conical) flask • Titrate with $KMnO_4$ in burette • End point faint pink/purple colour (AW) • Repeat until concordant ***Fine detail points:*** • *dry glassware or rinse with appropriate solution* • *add dropwise(AW) near end-point* • *use white tile* • *read burette at eye level* • *do a trial run* • *concordant means two readings ±0.1 cm^3* **Calculation** • calc of amount MnO_4^- (20.8 x 0.02/1000) = 4.16 x 10^{-4} (mol) • correct use of factor of 5 (amt Fe^{2+} in 25 = • 4.16 x 10^{-4} x 5 = 0.00208 (mol)) • correct use of factor of 10 (amt Fe^{2+} in 250 = 4.16 x 10^{-4} x 10 = 0.0208 (mol)) • calc of mass of Fe^{2+} (0.0208 x 55.8 = 1.16g) • calc of % 1.16 x 100/5.88 = 19.7% (if 56 used as A_r for Fe, 19.8%) • 3sf

Question			Answer	Mark	AO Element	Guidance
34	(d)		The Cl_2/Cl^- (redox half-cell) electrode potential/E^o value is more negative than that for MnO_4^-/Mn^{2+} ✓ Cl^- are oxidised to Cl_2 (as well as Fe^{2+} to Fe^{3+}) so the titre would be larger ✓	2	3.2 (x2)	**ALLOW** any clear indication of half-cell e.g. half cell 8 & 9 **ORA** throughout
			Total	17		

Question			Answer	Mark	AO Element	Guidance
35	(a)		the amino acids are joined to t-RNA with an anti-codon ✓ these attach to codon/ triplet on mRNA ✓	2	1.1 (x2)	**ALLOW** description of complementary sequence for anti-codon or CCACGG
35	(b)	(i)	A carbon atom with four different groups bonded/ attached to it ✓	1	1.1	
35	(b)	(ii)	 3-D tetrahedral using solid/dashed/wedge lines for bonds ✓ related object and mirror image ✓	2	1.1 (x2)	**DO NOT ALLOW** Two in plane lines at 180° but ECF **DO NOT ALLOW** incorrect connectivity in first isomer but then ECF One image must be 3D to score

Question			Answer	Mark	AO Element	Guidance
35	(c)		$H_2NCH(CH_3)COHNCH(CH_2OH)COOH$ **OR** $H_2NCH(CH_2OH)COHNCH(CH_3)COOH$ formula ✓ peptide link ✓	2	1.1 (x2)	**ALLOW** 'CONH' Accept any unambiguous structure.
35	(d)	(i)	zwitterion ✓	1	1.1	
35	(d)	(ii)	$H_3N^+CH(CH_3)COO^- + H_3O^+ \rightarrow H_3N^+CH(CH_3)COOH + H_2O$ ✓ $H_3N^+CH(CH_3)COO^- + OH^- \rightarrow H_2NCH(CH_3)COO^- + H_2O$ ✓	2	1.2 (x2)	**ECF** if amino acid used instead of zwitterion Ignore state symbols
35	(e)		The C=O is polar as O is more electronegative than C, so the O is δ^- ✓ The N-H bond is polar as N is more electronegative that H, so the H is δ^+ ✓ The H atom is attracted to the lone pair of electrons on the O atom ✓	3	1.1 (x3)	CHECK the diagram for lone pair on O (in C=O) and δ^-/δ^+ O is δ^-/ H is δ^+ can be scored from diagram if appropriate description of electronegativity is written Ignore O/F Mp3 can be scored from labelled diagram

Question			Answer	Mark	AO Element	Guidance
35	(f)		Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. **Level 3 (5–6 marks)** A good knowledge of mechanism with good evaluation of shape of curve including consideration of both RDS **AND** order of reaction for both high and low [S]. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (3–4 marks)** A good knowledge of mechanism with evaluation of shape of curve including some consideration of RDS / order of reaction for high / low [S] ,/ change in shape of graph *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* **Level 1 (1–2 marks)** Most of the symbols are explained Simple description of rate *There is an attempt at a logical structure with a line of reasoning. The information is in the most part relevant.* **0 marks** *No response or no response worthy of credit.*	**6**	**2.7 (x3)** **3.2 (x3)**	***Indicative scientific points include*** **Knowledge of mechanism** • E is enzyme • S is substrate • ES is the enzyme-substrate complex. • EP is the enzyme-product complex. • P is the product **Evaluation of shape of curve** *low [S]:* • When [S] is low, sufficient active sites on E for all S to bind, rate increases as [S] increases • Rate is proportional to [S] • Reaction is first order (wrt [S]). • RDS is E + S → ES *high [S]* • When [S] is high, all active sites are occupied, no change in rate • Increasing [S] has no effect on rate • Reaction is zero order wrt [S] • RDS is EP → E + P (or ES → EP)
				19		

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on

01223 553998

Alternatively, you can email us on

support@ocr.org.uk

For more information visit

ocr.org.uk/qualifications/resource-finder

ocr.org.uk

Twitter/ocrexams

/ocrexams

/company/ocr

/ocrexams

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT

OCR is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up-to-date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please contact us.

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our Expression of Interest form.

Please get in touch if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.