OCR
RECOGNISING ACHIEVEMENT

GCSE

Additional Science A
Twenty First Century Science

General Certificate of Secondary Education **J631**

Report on the Units

January 2008

J631/PER/R/08J

Oxford Cambridge and RSA Examinations

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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CONTENTS

GCSE Twenty First Century Science

Additional Science A (J631)

REPORTS ON THE UNITS

A215/01 – Twenty First Century Additional Science A (B4, C4, P4) Foundation Tier

General Comments

The paper was well attempted and produced a high mean mark.

Examiners noticed that candidates tended to answer questions more accurately if they had been trained to highlight the command words in a question. If a question asks candidates to draw one line between two boxes, then credit is not possible if all the boxes are joined.

As in previous years, candidates who change their answers must do so clearly – for example, candidates who changed the letter 'C' to an 'E' sometimes produced such an ambiguous response that no credit could be given. The best policy is to cross the old answer out and write the new answer underneath or to the side.

Comments on Individual Questions

Q1 This question was well attempted. Almost all candidates were able to identify at least one part of the explanation for the flame colour of copper, and many could select both. Weaker candidates often went for 'copper conducts electricity' or 'copper is cheap' as being relevant in this case. Most candidates correctly realised that the series of lines is a line spectrum.

Q2 The most able candidates had no difficulty in identifying which Periodic Table diagrams represented a group, which a period and which non-metals. Candidates of average ability could often identify the non-metals but had more difficulty with groups and periods.

Q3 This question overlapped with the higher tier paper.
The majority of candidates were able to make sensible predictions for the melting point of sodium and the boiling point of potassium. The most able could often go on to suggest why there might be a disparity in the boiling point for lithium as given by different sources. Candidates of all abilities had difficulty stating the formula of potassium chloride; KCl_2 and KCL [ie with an upper case 'L'] were common mistakes.

Q4 Most candidates knew the colour of at least one halogen and the state of another. The most able were able to complete the whole table correctly. Some candidates appeared unfamiliar with the term 'state of element'.

Q5 This question overlapped with the higher tier paper.
Most candidates had difficulty identifying the size and direction of the resultant force on the helicopter, but they found it slightly easier to identify the quantities which were increasing.

Q6 Simple ideas about motion in the context of cars were well understood. Most candidates chose the correct expression for speed, and many went on to identify the sections of the velocity / time graph. The relationship between brakes, energy, seatbelts and forces was also well understood.

Q7 Many candidates knew how to calculate a change in momentum, though some appeared to assume that this was a speed calculation and so chose 20/4 as their response. The most able also clearly understood the transitions taking place in a falling body for part (a).
Most candidates found part (c) difficult; the brick was often assumed to be weightless when immersed in water.

Q8 This question overlapped with the higher tier paper.
Candidates often perform badly on questions about osmosis, but in this case many realised that side B in the diagram represented a dilute solution. Able candidates could identify the role of the partially permeable membrane and could also state what happens when more glucose molecules are added. However, the movement of the water molecules was poorly understood.

Q9 Most candidates knew that enzymes are made of proteins, and could go on to identify one of the correct statements about enzymes. However, they had much more difficulty going on to decide just how many of these statements were correct. The diagrammatic representation of the function of an enzyme in breaking down molecules was well understood.

Q10 Ways by which water is transferred into and out of the body, and also the link between the kidneys and dehydration, were well understood, with more able candidates scoring full marks. Candidates who were less certain usually confused the effects of respiration and breathing. In part (c), very able candidates could relate the use of ecstasy to urine production.

A215/02 – Twenty First Century Additional Science A (B4, C4, P4) Higher Tier

General Comments

The vast majority of candidates appear to have been entered for the correct tier, with only a small number earning total marks in single figures. Those candidates would have fared much better had they been entered for the Foundation Tier. A few candidates earned all of the marks, but otherwise the exam provided good discrimination.

Some candidates would have benefited from reading instructions more carefully and answering accordingly. For example, in Q7(c)(i), many candidates appear to have assumed that they were selecting from velocity-time graphs instead of distance-time graphs. Again, in Q11, many weak candidates ignored the instructions and linked each box on the left to another box on the right.

Candidates who were able to give clear and unambiguous indications of their responses fared better than those who changed their minds several times, failed to completely cross out their previous answers, used crosses instead of ticks and wrote answers down carelessly. Some answers to the chemistry questions required candidates to clearly distinguish between lower and upper case, and many appear to have lost marks through careless writing.

Comments on Individual Questions

Q1 This question also appeared in the foundation tier paper.
Parts (a) and (b) required candidates to process information about melting and boiling points of elements, and were correctly answered by most candidates.
Part (c) proved to be much harder, with even the brightest candidates failing to write down the lower case l of KCl clearly and unambiguously.

Q2 Ions proved, as ever, to be a hard topic for many candidates. Only half of the brightest candidates managed to correctly identify the correct diagram in (a), representing an ionic solution. Many weak candidates thought incorrectly in (b) that ionic solids conduct electricity. On the other hand, almost all candidates managed to balance the equation in (c) correctly. Part (d) required candidates to know about state symbols. About one in ten candidates did not even attempt this part, and only half of the brightest candidates answered it correctly.

Q3 The majority of candidates were able to identify the correct statement about flame spectra.

Q4 Although most of the brightest candidates could identify the correct formula for the phosphate ion, many weak candidates appeared to be guessing.

Q5 This was the first opportunity for candidates to lose marks through careless reading of the question. This featured five particles called A, B, C, D and E made from protons, neutrons and electrons. Instead of writing the letters A to E, some candidates wrote down proton, neutron or electron in the space provided.
Part (c) proved to be the most difficult with few candidates daring to suggest that three particles could be atoms.

Q6 This was the first of the physics questions and also featured on the foundation tier paper. It was well answered by bright candidates, but about half of the weak candidates struggled to earn marks.

Q7 This question was about the motion of vehicles. Part (a) was hard because candidates had to get all three links (each straightforward) correct. Pleasingly, most candidates were able to identify the correct speed conversion calculation. Both parts of part (c) were hard for all candidates. The majority of candidates incorrectly selected B (which looked like the correct velocity-time graph). Even fewer candidates were able to calculate the force from the momentum change and the time (probably because they also had data for distance and speed). More worryingly, even the brightest candidates struggled to identify the correct statement for a seatbelt.

Q8 Only the brightest candidates earned both marks for (a), but the calculations of (b) and (c) were well answered by many more candidates than expected. Few candidates earned the mark for (d).

Q9 This was the first of the biology questions, and also featured on the foundation tier.
Most candidates were able to correctly answer parts (a) and (b), but even the brightest struggled to say what happened to the water molecules for (c). Osmosis is clearly a hard topic - most candidates appeared to be guessing for (d).

Q10 This question was about enzymes. Although bright candidates were able to correctly draw the missing parts in (a), many weak candidates declined to answer it at all, suggesting that they had never met this type of diagram. Although almost all candidates knew the name of the model for (b) and how it explained denaturing for (c), only the brightest candidates knew that pH can alter the shape of the active site for (d).

Q11 Too many weak candidates ignored the instructions and connected every box on the left to a box on the right. However, all candidates who used a single link as required, stood a good chance of earning both marks for (a) and one mark for (b).

A216/01 – Twenty First Century Additional Science A (B5, C5, P5) Foundation Tier

General Comments

Students tackled the types of question very well. It was unusual to see any gaps. Candidates used their time well and completed the paper fully. There was evidence that many candidates revisited their answers and revised their responses.

A common error was not to make enough choices in the questions. For example, in Q 5.

Candidates find 'true/false' type questions very difficult. This paper contained several examples that could be used to practise them.

Teacher's tip:
Use this paper to practise 'true/false' type questions. Look at questions 1c, 2c and 8c.

Candidates who revisited answers often crossed out previous answers and sometimes rewrote new answers in margins. Examiners mark the answer that the candidate have given as his/her 'last' answer, wherever it is written.

Comments on Individual Questions

Q1 This question also appeared on the higher tier paper. Common questions are designed to test achievement at grades D and C and so proved quite demanding for foundation tier candidates.

(a) Mitosis is not well understood by foundation tier candidates. Most did not know that the number of chromosomes in the nucleus is unchanged after mitosis.

(b) Again, this was a difficult question for foundation tier candidates, but most made an attempt at the question.

Teacher's tip:
Remind candidates that if they do not know the answer in a 'put a ring round' type question that they should guess. In this case there was a one in three chance of gaining a mark.

(c) Again, true/false statements about mitosis were very challenging, but most candidates used educated guesswork to gain one of the two available marks.

Q2 This question contained mainly lower demand tasks, so most candidates showed better performance here and many scored at least half marks.

(a) Most candidates could get at least a partially correct order for protein synthesis and so gained at least one mark.

(b) A relatively common error was to ring one, rather than two names here.

Teacher's tip:
Use this question as practice for the 'number of answers to choose' technique. Make sure students notice that they are asked to put a ring around two correct names.

(c) There were a large number of true/false choices in this table. The mark scheme allowed four or five correct choices for (3) marks, so that many candidates gained two or three marks.

Q3 This question was, again, of lower demand. However, candidates found (b) rather difficult, showing that the role of hormones in growth is not well known.

(a) Most candidates gained an easy mark for knowing that plants grow towards light.

(b) In spite of this question being a choice between only three answers, many candidates did not realise that rooting powder contains hormones. Many guessed 'fertilser'. Not many knew that cuttings form root cells or that xylem forms from unspecified cells.

Q4 Most candidates performed very well here, showing an easy grasp of pie charts.

(a) Almost all candidates correctly labelled the pie chart by using the data in the table.

(b) Almost all correctly selected 'oxygen' from the table.

Q5 (a) The commonest error here was to tick one, rather than two, boxes.

Teacher's tip:
Use this question as practice for the tick box technique. Make sure students notice that they are asked to tick two explanations.

Q6 This question was well done, showing that candidates understand diagrams of molecular structures very well.

(a) Most candidates correctly identified that there are three elements in this compound.

(b) Similarly, most candidates were able to identify the three elements by name.

(c) Most correctly selected the correct formula from the list.

Q7 This question was a common question with the higher tier, aimed at C/D attainment. Nevertheless, foundation tier candidates scored well here, showing good skills at extracting information from diagrams and tables.

(a) Most candidates correctly interpreted the diagram to show the correct stage. In (ii), most were able to identify the numbers showing both routes that carbon enters rocks from air.

(b) Again, very good skills of interpretation were shown so that most candidates identified the types of molecules asked for and were also able to extract the names of the elements in protein from the table.

Teacher's tip:
Use this question as practice for extracting information from diagrams and tables – most foundation tier candidates do not always find this easy.

Q8 This question was also a common question with the higher tier, aimed at C/D attainment. Foundation tier candidates found this significantly more challenging, implying that electrical circuits are poorly understood.

(a) Very few candidates could give correct answers to both sets of choices. All distracters were chosen, implying that candidates are very confused by how switches work in circuits.

(b) Most candidates were able to draw a complete circuit. Common errors were to draw the ammeter in parallel or to leave small gaps in the circuit by careless drawing.

(c) Very few candidates could correctly identify the true and false statements about increasing current.

Q9 This question was intended for lower demand attainment, but candidates found it surprisingly difficult. Many did not answer part (c) in a mark worthy way – many drew too many lines between the boxes.

(a) Most candidates knew generators produce electricity.

(b) The numbers were confusing for many candidates. Despite there being only three numbers to choose between, many gained no marks here, implying confusion about voltage in coils.

(c) This was an unusual type of question in that only one line should have been drawn across the page. Commonly, candidates drew lines across all the boxes so that they did not score any of the two available marks.

Teacher's Tip:
Use this question to highlight to students that they need to read the instructions at the beginning of the question carefully. 'Common' question types are sometimes presented with a 'twist'.

Q10 Again, candidates found this question difficult, despite it being aimed at foundation tier candidates only.

(a) Some candidates knew that the resistance of a thermistor was affected by temperature, but 'light intensity' was a common wrong choice.

(b) Not many candidates knew that voltage and potential difference are similar terms, but some did know that potential difference is a measure of the energy transferred.

(c) Some candidates correctly calculated 4V as the potential difference across the thermistor, but 2V was also commonly chosen.

A216/02 – Twenty First Century Additional Science A (B5, C5, P5) Higher Tier

General Comments

This was the first occasion for which A216/02 was available; it was encouraging to observe that candidates were well prepared for this style of paper. The paper was well done by most, with nearly half scoring more than 25 marks.

The paper appeared to be accessible to many candidates. Very few attempted to use forms of response other than those directed within the rubric of the paper and even fewer provided answers in inappropriate locations on their scripts. However, some candidates attempted to use responses other than those directed within the rubric of the paper, e.g. use of T and F, instead of true and false. Although this is not desirable, the mark scheme reflected such variation in the presentation of responses. The marks allocated were not affected, unless responses were unclear or ambiguous.

Comments on Individual Questions

Q1 This question was common with the foundation tier.

(a) This item appeared to be a straightforward recall in relation to chromosome number during mitosis. However, a number of candidates failed to recognise that the chromosome number stayed the same.

(b) Many candidates appreciated that organelle number increased in cells prior to the process of mitosis. Such candidates appeared to have a good understanding of the cell cycle.

(c) (i) More than half of the candidates obtained full marks for this but some were confused about the identical nature of the products.

(ii) No significant issues were identified for this item. Many candidates knew that the zygote contains a set of chromosomes from each parent.

Q2 (a) Most candidates were able to interpret the data for triple base order and match it to the overall DNA sequence.

(b) Many candidates were able to relate the four base combination to the maximum number of triplets produced; however, some appeared to guess their response.

(c) A surprising number of candidates identified Maria, relatively few gave the correct response.

(d) Relatively few candidates were able to appreciate the relationship between the number of amino acids found and the number of triplet codes. Many incorrectly chose the 'nonsense code' option. Some candidates seemed to struggle since they drew more than one line emerging from a single box.

Q3 (a) A number of candidates were confused with this item. The application and value of egg cell nuclei in stem cultures is not fully appreciated.

(b) Although many candidates obtained the mark, some only circled one feature. Many correctly identified that the stem cells were unspecialised but chose other options, rather than the property of rapid growth.

(c) Most candidates understand the relevance of the 8 cell stage in embryos.

(d) No clear pattern emerged in relation to the responses given. Some more able candidates were able to translate the statements, whereas others identified one correct statement. The difference between plants and animals was challenging in relation to the criteria presented.

Q4 This question was common with the foundation tier.

(a) (i) Many candidates were able to name the stage for carbon transferred into animals. This was clearly evident in the diagram.

(ii) Although the carbon cycle diagram initially appeared to be complex, many candidates coped well and correctly identified the two routes of carbon transfer from the air into rocks.

(b) (i) Almost all candidates provided correct responses. They were capable of interpreting the numerical data in the table.

(ii) Again, no significant issues were identified for this item, protein composition was shown clearly.

Q5 (a) No clear pattern emerged. Many candidates failed to provide a correct response. They could not express the correct combination of symbols represented in magnesium bromide.

(b) Again, no clear pattern emerged. Relatively few candidates provided the correct response.

Q6 (a) Generally well-answered but some candidates did not appear to understand the properties of ores.

(b) This item provided a significant challenge for the candidates. However, many candidates did identify the pattern of four ‘correct’ ticks in the right hand column, that is, they understood the principle of electrolysis in terms of ion migration.

(c) No clear pattern emerged in relation to the responses given. Some candidates were unable to complete the calculation correctly.

Q7 (a) The correct response was given by many candidates. They understood that the atoms in the rock arranged themselves in a regular way.

(b) This item appeared to present the greatest difficulty for almost all candidates. It seemed that they were reluctant or did not have the confidence to provide more than one letter in their response. Very few gave two letters and even fewer obtained the mark. Many therefore failed to obtain a mark since they provided one letter only.

Q8 The correct response was given by many candidates. Candidates realised the basic feature of air as a gas, i.e. the forces between the molecules are weak.

Q9 This question was common with the foundation tier.

(a) (i) Most candidates realised that the air gap in the switch acts as an insulator. The alternative responses did not indicate a particular pattern.

(ii) Many candidates provided the correct response. They realised that a 'charge' moves round the circuit when the switch is closed. Again, the alternative responses did not indicate a particular pattern.

(b) Many candidates were able to complete the circuit correctly and showed the correct position and appearance of the ammeter. However, some continue to draw ammeters in parallel circuits. The ammeter should not, ideally, contain a line passing through the centre but, since the candidates were requested to add an ammeter before completing the circuit, this error was not penalised.

(c) Many candidates gave the correct response, indicating a sound understanding of circuits.

Q10 (a) Many candidates were able to identify the correct process for the generation of electricity. The alternative responses did not indicate common misunderstandings.

(b) Although many candidates were able to correctly put the sentences in order, many were confused. However, a number of candidates did obtain 2 marks even though their chosen sequence indicated that they did not understand the overall process of electricity transfer from a power station to our homes.

(c) This item seemed to be challenging for many candidates. No clear pattern emerged from alternative responses.

Q11 (a) Many candidates appreciated that the process was concluded with an increase in the potential difference across the resistor. However, some candidates were confused about the first two steps.

(b) Many candidates coped well with this item. A significant number were able to at least obtain one mark for the ‘voltages’ to ‘transfer energy gained’ link. As for item 2(d) some candidates drew more than one line emerging from the left hand boxes, thereby creating an ambiguous response.

(c) Many candidates failed to identify the correct calculation. Many chose ‘6 + (0.08 x 45)’ or ‘O.08 x 45’ responses. The calculation of potential difference continues to be very challenging.

A217/01 – Twenty First Century Additional Science A (B6, C6, P6) Foundation Tier

General Comments

It was good to find that nearly all candidates attempted every single question, and that no candidate earned very high or very low marks. This suggests that nobody was entered for the foundation tier who would have profited from doing the higher tier paper instead.

As always, legibility of candidates' responses continues to be an issue. This was particularly true for Q5(c), which required candidates to write T or F in each box. Some candidates who wrote T and then added an extra horizontal to make F, might have been better off crossing out the T and writing F next to it to make their response clear.

Comments on Individual Questions

Q1 This was the first of the physics questions. Most bright candidates knew the order of the electromagnetic spectrum for (a)(i), but none of them seemed to know the property they had in common for (a)(ii). Similarly, only some bright candidates knew the difference between refraction, diffraction or reflection for (b), and many candidates showed a poor understanding of the process of modulation in (c).

Q2 This question also featured on the higher tier paper. The majority of candidates, across the ability range, found parts (a) and (b) very straightforward.

Q3 The majority of candidates knew that energy was the correct answer for (a), and could identify the correct calculation for the wave speed in (b)(i). However, the changes to wavelength and speed required for (b)(ii) proved much harder for candidates, as did the allocation of transverse or longitudinal to waves required for (c).

Q4 This was the first of the chemistry questions and also appeared on the higher tier paper. As expected, only the brightest candidates scored well for (a), but unexpectedly, all candidates had difficulty with (b). Many candidates decided to dry the solution before filtering it.

Q5 Surprisingly, only bright candidates earned marks for (a)(i) and (a)(ii), about the manufacture of magnesium sulfate. Weak candidates appear to have guessed both the type of acid required and the formula of the product. However, it was pleasing to find that the majority of candidates could correctly interpret the graph of (b).
Part (c) proved to be harder, with only about half of the bright candidates correctly identifying all of the true statements. Candidates who altered their T to look like F ran the risk of their answer being misinterpreted by the examiner - it is always safer to completely obliterate an incorrect response and write out the new one.

Q6 All candidates found this question about titration equally difficult, with few of them earning all of the marks.

Q7 This was the first of the biology questions. It also featured in the higher tier paper. Even the majority of weak candidates managed the calculation for (a), and could interpret the results of the experiment for (b). However, only bright candidates knew about involuntary reflexes for (c).

Q8 The majority of all candidates could correctly identify two functions of the cerebral cortex.

Q9 It was good to find that the vast majority of all candidates were able to correctly identify the parts of a nerve cell for (a). Most bright candidates correctly identified both functions of the fatty sheath. However, only bright candidates were able to make sense of part (c) about the reflex arc.

A217/02 – Twenty First Century Additional Science A (B6, C6, P6) Higher Tier

General Comments

Examiners noticed that candidates tended to answer questions more accurately if they had been trained to highlight the command words in a question. If a question asks candidates to draw one line between two boxes, then credit is not possible if all the boxes are joined.

As in previous years, candidates who change their answers must do so clearly – for example, candidates who changed the letter 'C' to an 'E' sometimes produced such an ambiguous response that no credit could be given. The best policy is to cross the old answer out and write the new answer underneath or to the side.

Comments on Individual Questions

Q1 This question overlapped with the lower tier paper.
This question was well attempted. The majority of candidates were clearly familiar with microwaves in the context of a microwave oven, and most went on to identify the wavelength in the diagram.

Q2 Most candidates could correctly place the word 'photons' into the passage. A few also filled in the other two gaps correctly and so gained the second mark. The relationship between the pulsed infrared beam and digital code was well understood.
In part (c), most candidates recognised that the change in direction was due to refraction, but had much more difficulty in identifying the correct statement explaining the change in direction.

Q3 (a) A significant minority of candidates had problems both in recalling and using the relationship between wave speed, frequency and wavelength, and also in deciding on the direction of the disturbance of the wave.

(b) The more able candidates recognised which diagram represented frequency modulation, and almost all candidates were able to gain credit for completing at least some of the sentences correctly.

Q4 This question overlapped with the lower tier paper.
Able candidates identified the two equations which could be combined to produce copper sulfate. However, though the instruction to draw one line only was emboldened, many candidates joined three pairs of boxes and so gained no credit.
The question on stages in the purification of copper sulfate was surprisingly badly done. Some candidates did not recognise the significance of filtration as a means of separating a solution from impurities, and even more may have been unfamiliar with drying as a stage in purification. Several candidates ignored the statement that 'the first one has been done for you' and used the letter C for a second time.

Q5 (a) This was designed to test candidates' understanding of masses in chemical reactions. The majority of candidates scored the mark for relative formula mass and the most able went on to score the remaining two marks.

(b) This simple problem on percentage yields was very well answered, but candidates had slightly more difficulty in identifying the relevant lines from the graph in part (c). The effect of temperature was best understood, while that of particle size gave most difficulty.

Q6 Many candidates recognised that copper nitrate would be formed in the reaction, and the most able could go on to give its formula. The equation balancing task was also generally well attempted.

Q7 This question overlapped with the lower tier paper.
Candidates were clearly familiar with the deductions that could be made about woodlice in choice chambers and answered this question well. Weaker candidates had great difficulty in deciding how many responses in part (b) were correct. More able candidates realised that two answers were required, and also that the behaviour of the woodlice was involuntary.

Q8 (a) Most candidates showed a partial understanding of the sequence of events at a synapse and were able to gain some credit. More able candidates gained all three marks. However, as in question 4, several candidates ignored the information that 'the first one has been done for you' and used the letter D for a second time.

(b) This was also well attempted, but the effect of seratonin on the transmission of nerve impulses in part (c) was less well recognised.

Q9 Conditioned reflexes, the role of the cerebral cortex and the link between learning and pathways in the brain were all well understood.
In part (c), most candidates gained credit for identifying which types of behaviour are learned, though some had difficulty in deciding how many of the responses were correct.

Grade Thresholds

General Certificate of Secondary Education
Additional Science A (Specification Code J631)
January 2008 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A*	A	B	C	D	E	F	G	U
A215/01	Raw	42	N/A	N/A	N/A	26	22	18	15	12	0
	UMS	34	N/A	N/A	N/A	30	25	20	15	10	0
A215/02	Raw	42	33	28	22	17	12	9	N/A	N/A	0
	UMS	50	45	40	35	30	25	23	N/A	N/A	0
A216/01	Raw	42	N/A	N/A	N/A	28	25	22	19	16	0
	UMS	34	N/A	N/A	N/A	30	25	20	15	10	0
A216/02	Raw	42	33	29	24	20	16	14	N/A	N/A	0
	UMS	50	45	40	35	30	25	23	N/A	N/A	0
A217/01	Raw	42	N/A	N/A	N/A	28	24	21	18	15	0
	UMS	34	N/A	N/A	N/A	30	25	20	15	10	0
A217/02	Raw	42	35	31	26	21	16	13	N/A	N/A	0
	UMS	50	45	40	35	30	25	23	N/A	N/A	0

Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A*	A	B	C	D	E	F	G	U
J631	300	270	240	210	180	150	120	90	60	0

No candidates were entered for aggregation this series. First aggregation opportunity is in June 2008.

For a description of how UMS marks are calculated see:
http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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