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Examiners' Report Summer 2008

GCSE

GCSE Design & Technology: Systems and Control Technology (1974/3974)

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Summer 2008

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GCSE Design and Technology: Systems and Control Technology
Principal Moderator's Report - June 2008
1974, Paper 01 (Coursework)

General Comments

Most centres offered coursework projects that enabled their candidates to perform and relate to KS4 levels of achievement. Many of the centres who have followed this course for a number of years are now well organised in the administration and delivery of the coursework requirements. These centres have submitted work that demonstrates a good understanding of the course requirements providing their candidates with opportunities to reach standards appropriate to the full range GCSE levels of achievement.

A minority of centres who chose a mechanisms approach found difficulty in developing ideas much above a KS3 level of practical capability. Much of the modelling of mechanisms was often limited to soft materials (card/paper) or use of commercial kits.

This year has again seen the growing use of computer software used to design electronic circuits. This very much assists candidates to produce design solutions in a professional, accurate and effective manner. However, as the computer approach to designing circuitry moves forward, it has become more difficult for the moderators to recognise the level of knowledge and understanding a candidate has gained. It may well be that moderators will in future require further guidance in recognising and measuring the skills required to use selected software. Moderators is also identified an issue where very similar computer generated designs are being shared between candidates at a centre.

Generally the quality of the photographic evidence continues to improve yet some centres are still not providing photos of key elements of their project work. Where centres did not support the marks given for (select, use and making) with suitable photographic evidence, it was difficult for moderators to agree the marks. Photographs must focus on the outcomes of the building and development of circuits and systems. Some centres have been reminded of the need to focus their photos more on areas showing the levels of skill developed throughout the building process.

Moderators also reported that some centres were not carefully binding folders together, often allowing pages to become separated. While this is now limited to just a few centres it can be a very time consuming exercise for moderators who must correlate the separated sheets. Where this has occurred moderators have reminded centres to number and label each page of a candidates folder.

Criterion 1

Identify needs, use information sources to develop detailed specifications and criteria.

Many centres are now providing candidates with appropriate and often challenging design opportunities. Few centres have difficulty in addressing the requirements of this section with many now achieving the high mark award. If there is a weakness shown in this section it is often where a candidate fails to recognise the importance of the product specification. The need to use the key points of a specification to measure progress at each stage of development is often overlooked and this too often restricts some candidates from achieving the higher mark awards.

Criterion 2

Develop ideas from the specification, check, review and modify as necessary to develop a product.

Ideas, Develop and Review

In previous reports it has been mentioned that moderators are concerned regarding the growing use of IT in finding design solutions. To gain the higher marks it is expected that candidates use a wide range of strategies to support and develop their ideas. As in previous years some centres have awarded high marks where candidates had simply produced 'screen shots' of circuit designs using computer software. Again, there has been a need for moderators to remind centres that to achieve a high mark award candidates are expected to use a wide range of appropriate sources to develop ideas. The use of computer software to model and test ideas is appropriate. However, this approach should be shown to compliment and support modelling in 3D where candidates can relate the skills of using the computer to the progress in achieving practical outcomes.

Review still appears to be a problem for those candidates who do not recognise the importance of the initial specification. Where candidates have been able to review progress against each of the specification points and where they have been able measure designing progress against these points they have achieved a higher mark award.

Criterion 3

Use written and graphical techniques including ICT and CAD where appropriate to generate, develop, model and communicate.

Written communication, Other Media and ICT

The technical vocabulary used by many has enabled many to achieve high mark awards for written communication. The use of computer software provides most with an opportunity to produce high levels of presentation and this now often features the use of Computer Aided Design (CAD) software. There have been few issues to address in this area as most teacher examiners are accurate when marking this section.

Criterion 4

Produce and use detailed working schedules, which include a range of industrial applications as well as the concepts of systems and control. Simulate production and assembly lines using appropriate ICT.

Systems & Control, Schedule and Industrial Applications

Systems and Control still remains an area too briefly addressed and centres are still reminded of a need to identify the Inputs, Processes and Outputs on their diagrams/charts. Moderators still feel the need to remind centres to provide a key to each stage of their diagrams also the need to provide details of where feedback occurs showing details of quality control.

Schedules where candidates provide details of manufacturing techniques, materials, tools, processes, where they have recognised time constraints of the making process they have been able to gain a high mark award.

Industrial applications is still often under marked by centres who do not recognise that by designing and making a Printed Circuit Board (PCB) the high mark award is appropriate. Moderators continue to remind some centres to be more generous where there is clear evidence of a candidate have accurately manufactured a PCB.

Criterion 5

Select and use tools, equipment and processes effectively and safely to make single products and products in quantity. Use CAM appropriately.

Select & Use, Make Products, Work Safely

As in previous years the moderation of this section continues to rely heavily upon good quality annotation and clear photographs. Without such evidence moderators are unable to agree high marks. Good practice was often seen in the way of a picture book display of the candidate practicing and developing the use of skills. Where these were presented with notes explaining how a skill was being understood and where each stage was carefully analysed then higher marks were agreed. Where good photographs have shown the quality outcome of the soldering of components or the accuracy of careful machining, the moderators were able to agree the marks awarded. Some centres are still providing photos of a more general nature showing little detail of making skills. In such cases the moderators have informed centres that the higher mark award can only be awarded where they provide clear photo evidence of the skilful making.

While not too many centres offered mechanical system solutions, of those who chose this route few were able to achieve the higher marks. The level of understanding of mechanical systems was often not extended much higher than what might be considered a KS3 level. Unfortunately, most outcomes where often simple card models or mechanisms that relied totally on the use of a modelling kit and this did not allow candidates to demonstrate any high levels of making skill.

More centres are recognising previous concerns regarding safety and a need to consider Risk Assessment in a more detailed manner. Unfortunately, some centres are still applying a full mark award using only teacher observation as evidence. We continue to remind centres of the need to provide detailed evidence of a candidate's understanding of safety requirements in order they be awarded the higher mark.

Criterion 6

Devise and apply tests to check the quality of candidate's work at critical control points. Ensure that candidate's products are of suitable quality for the intended use. Suggest modifications that would improve candidate's performance.

Tests, Checks, Evaluation & Modifications

More candidates are showing an awareness of a need to use the specification when measuring the outcome of tests. This is an area where many centres have improved, as they have also done with their evaluations. Many of the higher achieving candidates 4 produced quality evaluations where they ably related their design development and their outcomes to each feature of the original specification. Modification, on the other hand, was often over marked. Too often only simple

statements of future needs where listed and moderators often recognised that more detail was needed for a high mark to be awarded.

Difficulties Relating To Assessment

- Annotation: Some centres still fail to get candidates to number pages and label each page with a candidate number.
- Photographic evidence improves in quality but does not always focus on the key making features.
- Some centres are still exceeding the recommended folder size of approximately 20 pages.
- A few centres still send in work that in heavy often awkward folders.

GCSE Design and Technology: Systems and Control Technology
Principal Moderator's Report - June 2008
1974, Paper 2F

General Comments

Evidence indicates that candidates were entered at the correct level with those reaching the expected C grade in the foundation level being limited and few not gaining a grade at the higher level. There is evidence that candidates are still not being taught electronic theory with the most basic of concepts being poorly attempted. Examples of this will be highlighted in the question paper details.

These comments should be read in conjunction with the question papers and the published mark schemes.

Foundation Paper

Question 1

(a)
Candidates could identify the resistor, the snip nose pliers, and the meter, but had difficulty with the capacitor and the robotic arm.

(b)
The action of the named components etc. tended to reflect the answers given in 1a.

(c)(i)
Candidates did not know the reasons for using a relay as an interface device.

(c)(ii)
Many candidates could not draw two simple connection lines.

(d)
The majority of candidates scored at least two marks for this section.

(e)
The majority of candidates could give one reason for prototyping.

(f)
Candidates had no real idea what CIM was and any marks gained were by accident.

Question 2

(a)(i)
This question was well done by many candidates with most gaining at least two marks. The diode was often mistaken for an LED and the buzzer for a bell.

(a)(ii)(iii)(iv)
Many candidates gained some marks for thyristor theory, with those that understood latching usually gaining all three. However, most did not understand latching theory. This was disappointing as similar questions had appeared twice in previous papers.

(a)(v)
Some candidates gave excellent answers for the reason for the diode, most did not.

(b)(i)
The majority of candidates could not use the resistor colour chart to determine a resistor's value.

(b)(ii)
Most candidates had no idea what tolerance was.

(c)(i) & (ii)
This question was asked with students and their familiarity with iPods and MP3 players in mind. Unfortunately, many did not read the question, failing to focus on play back speed or playing functions.

(d) & (e)
These parts were reasonably well answered.

(g)
This question part should have been a discriminator but many candidates failed to focus their answers on domestic appliances. Many used entertainment devices, mobile phones or central heating systems.

Question 3

(a)
This question worked as a good discriminator with more able candidates scoring well on design 1 and reasonably well on design 2. There was still a problem with candidates giving generic materials and processes inappropriate for one-off production.

(b)
Candidates taking the foundation paper find it very hard to evaluate their own work, but there is no evidence to indicate that many teachers are teaching them to do it.

Question 4

(a)
Specifications work as a good discriminator with many candidates gaining some marks and the more able gaining 4 or more.

(b)(i)
Many candidates scored 1 mark for "light" but many also used "strong".

(b)(ii)
Candidates managed to identify aesthetics as a reason for plastic coating but few gained two marks.

(c)
Candidates at foundation level tend to struggle with properties and reasons with many gaining no marks at all.

(d)
Those candidates who read the question and gave "electronic" checks gained both marks. Too many gave answers relating to the bracket or the casing.

(e)
A hard question which few managed to answer correctly.

(f)

As long as candidates answered "how" the purposes were achieved they gained at least 2 marks.

GCSE Design and Technology: Systems and Control Technology
Principal Examiner's Report - June 2008
1974, Paper 2H

Evidence indicates that candidates were entered at the correct level with those reaching the expected C grade in the foundation level being limited and few not gaining a grade at the higher level. There is evidence that candidates are still not being taught electronic theory with the most basic of concepts being poorly attempted. Examples of this will be highlighted in the question paper details.

These comments should be read in conjunction with the question papers and the published mark schemes.

Higher paper

Question 1

(a)
Specifications work as a good discriminator with many candidates gaining some marks and the more able gaining 4 or more.

(b)(i)
Many candidates scored 1 mark for "light" but many also used "strong".

(b)(ii)
Candidates managed to identify aesthetics as a reason for plastic coating but few gained two marks.

(c)
Candidates at the higher level could give "good conductor", but generally gave a description of a good conductor rather than why it is appropriate for the product. Some gave "malleability" and others gave "ductile".

(d)
Those candidates who read the question and gave "electronic" checks gained both marks. Too many gave answers relating to the bracket or the casing.

(e)
A hard question which few managed to answer correctly.

(f)
As long as candidates answered "how" the purposes were achieved they gained at least 2 marks.

Question 2

(a)
Most candidates gained 2 of the 3 marks available, usually for the NAND gate and a 555 timer.

(b)
It was almost unbelievable how many candidates answered a question on testing rather than prototypes, and therefore gained no marks. This kind of question has been asked twice before in previous examination series and it was disappointing to mark so many incorrect.

(c)
Candidates tended to gain 3 or 4 marks for this question or none. Some put the process in the wrong order, some did not know the process at all.

(d)
This was well answered with most giving "reduced workforce, therefore less wages".

(e)
This question was good discriminator with the more able candidates gaining all 3 marks. Most candidates gained at least 1 mark, usually for "accuracy".

(f)
Candidates got mixed up between (i) & (ii), tasks which CAD can perform and ways that a 3D virtual product can be used to help in design.

Question 3

(a)
It was disappointing to note that many candidates lost marks because they used the generic "sensor" rather than a specific device such as an LDR or pressure pad. Many also used "motion sensor", probably meaning PIR but there are other types so this term could not be credited. Most candidates did not pick up on the term "secure" when designing their attachment. A simple "industrial" added to Velcro would have worked. Many used screws, which are not secure in a car's body unless they are self tapping screws. More candidates gained full marks for giving an appropriate material and process for batch production.

(b)
Most candidates are still not being taught how to evaluate their designs. After 5 sets of exams they are still giving statements such as "yes, my design succeeds because it has a pressure pad and a reed switch," instead of evaluating what is good or bad about the pressure pad and the reed switch. Those who had been taught the exam technique managed to gain at least 3 marks for this section.

Question 4

(a)(i)
Most candidates who gained a mark gave the answer as '1V', forgetting that this was the drop across R1 and taking the 1V away from 6V. Some candidates actually gave values greater than 6V.

(a)(ii)
Those candidates who read the question parts and who were taught basic electronics gained the majority of marks. Most did not.

(b)
Candidates either gained good marks from this part question or none. Those who had practiced drawing flow diagrams could answer it, those who had not floundered and were unable to gain marks by accident.

(c)
Candidates who focused on domestic appliances gained more than 2 marks for this part question. Many candidates lost marks because they focused on home entertainment, mobile phones or appliances that would not contain PICs. This was

disappointing as this has been highlighted before in a past principal examiner's report.

(d)
Most candidates focused on "less employees needed, therefore less to pay in wages", and gained the 2 marks.

(e)
Candidates had difficulty in distinguishing between moral issues and environmental issues, but most gained some marks from this section.

GCSE Design and Technology: Systems and Control Technology
Principal Examiner's Report - June 2008
1974, Paper 3F

General Comments

This is the sixth year that this specification has been examined. The specification tests candidates' knowledge and understanding of mechanisms, materials and products, processes and the effects of producing and using them on society and the environment. The written paper tests their application of this knowledge and understanding through their responses to questions about products and the processes involved in their manufacture, both in the workshop and as part of large quantity production.

It remains the case that candidates' knowledge of processes continues to lack the depth and detail needed in order to be able to access the whole range of marks available on the paper. Candidates should be prepared for this examination using the specification as a guide to direct what must be taught. It is not sufficient to rely upon and assume that candidates will gain sufficient knowledge and understanding through practical designing and making in their coursework. Candidates have to be taught on a more formal basis, the contents of the specification.

Most candidates performed well where questions were targeted at school workshop production but where commercially produced products were introduced candidates showed limited knowledge. Where questions asked for an explanation or description candidates continue to give a reason and lose the second mark because they did not justify or qualify their answers, although there is some evidence to suggest that this is starting to improve and notice should be taken of the information in the Teacher's Guide (pages 14 to 20) that gives clear guidance as to the distinct meaning of the wording and word hierarchy used in questions for this examination i.e. give/ state/ name/ describe/ explain. This should form part of the teaching practice to students in preparation for this paper. Centres are also reminded that candidates must write in pen rather than pencil, especially now that the papers are scanned, and that no correction fluid or pens should be used. Colour in the design responses is also to be discouraged. Candidates must also be encouraged to use only the space provided for their responses.

It must be stressed to candidates that the question needs to be read carefully in order to score marks, without wasting too much time on responses that do not score marks.

Foundation Tier (3F)

Most candidates showed a range of experiences throughout the paper and as a result could score some marks across all the questions. There were some obvious areas of materials and processes that were not covered by some centres which penalised their candidates.

There was no evidence to suggest that candidates had been entered for the wrong tiers this year and centres are demonstrating increasing expertise in preparing candidates for questions. There was also no evidence of centres or candidates misunderstanding the instructions. Candidates made responses to all questions suggesting that the length of the paper is correct. It was obvious that some areas of the specification are not being taught to candidates in centres and as a result some centres disadvantaged their candidates. A similar criticism can be made, as it is evident that some centres are not teaching candidates about the properties of

materials and the correct associated terminology rather than general generic statements such as 'strong'. The design question was either well understood by candidates or there was very little evidence that candidates could produce two different ideas rather that one idea developed. In many cases, candidates failed to identify different materials or processes and subsequently lost marks. A large proportion of candidates scored well but many were unable to make a reasonable attempt to evaluate their design in part b. Question 4 was well answered and it is evident that centres are preparing candidates for product analysis reasonably thoroughly.

Question 1

The style of this question is now very familiar and on the whole it was answered well with most candidates being able to name most of the items shown and they were able to describe their use.

(a)(i)
Most candidates could name the items correctly, but the brakes and ratchet caused the most problems.

(a)(ii)
There were varying descriptions of the ratchet.

(b)
Most candidates were able to give one correct response, most frequently related to the use of safety equipment.

(c)
Very well done by the large majority of candidates.

(d)
Again very well done by the large majority of candidates.

(e)
Well done by the majority with 'see if it works' as the most common response.

(f)
Poorly done by a large number with far too many candidates not even making an attempt at the question.

Question 2

(a)(i)
Generally most candidates scored very well on this part question.

(a)(ii)
Again a popular question in which most candidates scored well.

(b)(i)
A good set of responses with most candidates securing at least 1 mark. Candidates, in the future, must be prepared to fully describe their response in order to secure the full marks available.

(b)(ii)
Generally, most candidates scored well on this part question.

(c)(i)
Generally, most candidates scored well on this part question.

(c)(ii)
Generally, most candidates scored well on this part question.

(c)(iii)
Generally, most candidates scored well on this part question.

(d)(i)
This was well done by the large majority of candidates.

(d)(ii)
A good number of responses were seen that related to moving parts being protected in order to stop fingers getting trapped or cut.

(e)
Most candidates scored at least 1 mark, but all too often 'cheap' was a popular response.

(f)(i)
Generally, most candidates scored well on this part question.

(f)(ii)
Generally, most candidates scored well on this part question.

(g)(i)
This question was well done by the large majority of candidates

(g)(ii)
Materials being reused and or broken down into different material parts were the most common responses to this question where most candidates scored at least 1 mark.

Question 3

(a)
Most candidates scored quite well on this question this year. Ideas were generally clear and annotated though some had far too much annotation that was not always relevant. The best designs showed how the figures would move and clearly identified a mechanism. Very few candidates scored marks for the last point, failing to name materials and generally giving generic names like 'wood' or 'plastic'; even fewer gave consideration to the ability of the design to be made as a one-off product.

The second design idea often showed little difference from the first proposal, even down to naming the same material and using the same type of mechanism.

(b)
Many candidates did not evaluate their design proposals, merely repeating what the point asked e.g. 'my wheels rotate' or that 'they are fixed to the axle and so will not fall off'. Few candidates took the point into more detail to score the marks available.

Question 4

(a)
Many candidates were better prepared for this question this year. The quality and market headings caused the most problems for candidates. The environment section on the whole was the best attempted section.

(b)(i)
'Hard' and 'tough' were the most commonly seen responses here and most candidates scored well on this question.

(b)(ii)
This part question was well answered on the whole with 'appearance' and 'rusting' as the two most common responses given.

(c)
'Stronger' and 'durable' were the two most popular answers, but they were not always fully reasoned for the second available mark.

(d)
Almost all candidates scored at least 1 mark here and on the whole it was a very well done question for most candidates.

(e)
Poorly done by the large majority of candidates who all failed to acknowledge any detail or points relating to moulding complex shapes or that the plastic could be softened with heat.

(f)(i)
A good number of candidates scored 1 mark for 'legs folding' or the fact the bench got smaller.

(f)(ii)
Well done part question, with most making a comment about the long screws or that the work tops are adjustable.

GCSE Design and Technology: Systems and Control Technology
Principal Examiner's Report - June 2008
1974, Paper 3H

It was evident that the majority of centres had entered candidates correctly for this tier of the examination. A number of candidates showed a greater understanding of what the key words in questions were asking of them i.e. give/ state/ name/ describe/ explain. This should form part of the teaching practice to students in preparation for this paper. Centres are also reminded that candidates must write in pen rather than pencil and that no correction fluid or pens should be used. Candidates must also be encouraged to use only the space provided for their responses.

Question 1

(a)
Many candidates were better prepared for this question this year. The quality and market headings caused the most problems for candidates. The environment section on the whole was the best attempted section.

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(f)(i)
A good number of candidates scored 1 mark for 'legs folding' or the fact the bench got smaller.

(f)(ii)
Well done part question with most making a comment about the long screws or that the work tops are adjustable.

Question 2

(a)(i)
Generally, most candidates scored well on this part question.

(a)(ii)
Generally, most candidates scored well on this part question.

(a)(iii)
Generally, most candidates scored well on this part question.

(b)
A number of candidates failed to recognize the fact that the question related to a single item. However, most of the correct responses seen related to accuracy.

(c)
'CAD to model in 3D' was a very popular response and most candidates scored at least 1 mark here.

(d)
A very well done question which had been well taught in centres, with most candidates scoring at least 1 mark.

(e)
Most candidates were able to give 2 correct responses here.

(f)
The most popular response was 'less manpower required' and a very encouraging number of candidates were able to go on to explain their responses and, therefore, secure the marks available. 'Increased accuracy' was also a popular response.

(g)
Most candidate scored 2 marks here for what was a well answered question on the whole.

(h)(i)
Quite well done again with a very encouraging number of candidates scoring at least 2 marks.

(h)(ii)
Candidate responses were not always fully described here and, therefore, they naturally limited their marks. 'Testing' and 'modeling' were amongst the most popular responses seen.

Question 3

(a)
Most candidates scored well on this question this year. Ideas were generally clear and well annotated. The best designs clearly showed how the device would fit into the hand and with a clear mechanism labeled. Pliers-like devices were common and many made use of rubber material to grip the jar lid and they also naturally gained a mechanical advantage due to the leverage. Few candidates scored both marks for the last point failing to name materials, generally giving generic names like wood or plastic and even fewer gave consideration to the ability of the design to be batch produced.

The second design idea, in too many cases, often showed little difference from the first proposal, even down to naming the same material and using the same type of mechanism.

(b)
Many candidates did not evaluate their design proposals, merely repeating what the point asked e.g. 'my device fits into the hand' without any qualification or justification. Few candidates took the point into more detail to score the marks available.

Question 4

(a)(i)
Generally, most candidates scored well on this part question.

(a)(ii)
Well done by the large majority, but this was another example where the responses were not always fully described.

(a)(iii)
Again, well done by most for a single mark, but not always fully described for the second mark.

(a)(iv)
Generally, most candidates scored well on this part question.

(b)(i)
Most candidates scored 1 mark for stating that the arm would go up, but there was no description to say how the arm would go up, i.e. evenly / gradually.

(b)(ii)
Again most candidates scored 1 mark for stating that the arm would go down, but there was no description to say how the arm would go down, i.e. suddenly.

(c)
Not a popular question and on the whole poorly answered, the most popular responses being in relation to burning or scalding.

(d)
Quite well done by a good number who were fully able to explain at least 1 response for the 2 full marks.

(e)(i)
Well done by a good number with 'waste generation' as the most popular response seen.

(e)(ii)
Most candidates scored 1 mark here with responses relating to landfill being the most popular.

(e)(iii)
Well done on the whole with many responses relating to melting down the material to make a new product, or parts being reused to repair faulty items.

GCSE Design and Technology: Systems and Control Technology
Principal Moderator's Report - June 2008
3974, Paper 01 (Short Course Coursework)

A total of only 45 candidates from 3 centres entered this shortened course. In general marking was accurate and only sub-sampling was necessary.

This was a more popular course when D & T was compulsory and for those who had or have limited access for time to address the full course.

It is difficult to consider writing any detailed report based on seeing the work of so few candidates, but the comments and recommendations made in the full course report are valid and can be applied here.

GCSE Design and Technology: Systems and Control Technology
Principal Examiner's Report - June 2008
3974, Paper 2F (Short Course)

General Comments

It is very difficult to report on trends on either the 2F or the 2H papers as there were only 33 and 12 candidates respectively. As the product analysis question accounts for half marks in both papers it is the best guide to the C grade.

Product Analysis Question:

Question 3 in the Foundation Paper.

This question tended to reflect the trends found in the full course papers with only minor differences.

2F: 3(c) Most candidates identified good conductivity as a property and some identified malleability. This demonstrated that those candidates had been taught about the properties of the materials stated in the specification.

2H: 1(f) Most candidates gained 3 or 4 marks for identifying how the product fulfilled its purpose.

Foundation paper theory questions:

1(a)(i) & (ii) These parts were well answered with candidates finding most difficult with the capacitor.

1(b) & (c) These questions parts reflected the trends in the full paper with most candidates struggling to gain any marks.

2 This question reflected the trends in the full course paper with most candidates struggling to gain any marks except for naming the components in (i).

GCSE Design and Technology: Systems and Control Technology
Principal Examiner's Report - June 2008
3974, Paper 2H (Short Course)

General Comments

It is very difficult to report on trends on either the 2F or the 2H papers as there were only 33 and 12 candidates respectively. As the product analysis question accounts for half marks in both papers it is the best guide to the C grade.

Product Analysis Question:

Question 1 in the Higher paper.

This question tended to reflect the trends found in the full course papers with only minor differences.

2F: 3(c) Most candidates identified good conductivity as a property and some identified malleability. This demonstrated that those candidates had been taught about the properties of the materials stated in the specification.

2H: 1(f) Most candidates gained 3 or 4 marks for identifying how the product fulfilled its purpose.

Higher paper theory questions:

2 & 3 These questions reflected the trends in the full course paper.

n.b. There was no entry for 3974/3F and 3H this year.

GCSE Design & Technology: Systems & Control
(Full Course: 1974)

Grade Boundaries – Summer 2008

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2008 examinations.

(Foundation Tier out of 100)

C	D	E	F	G
51	41	31	22	13

(Higher Tier out of 100)

A*	A	B	C	D	E
77	66	55	45	34	28

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2008 examination.

(Coursework 01 out of 102)

A*	A	B	C	D	E	F	G
92	80	68	56	45	34	23	12

(Paper 2F out of 88)

C	D	E	F	G
43	34	26	18	10

(Paper 2H out of 88)

A*	A	B	C	D	E
48	41	34	27	17	12

(Paper 3F out of 88)

C	D	E	F	G
46	38	31	24	17

(Paper 3H out of 88)

A*	A	B	C	D	E
60	52	44	36	29	25

GCSE Design & Technology: Systems & Control
(Short Course: 3974)

Grade Boundaries – Summer 2008

Overall Grades

The figures given below are the minimum subject marks required for each overall grade in the summer 2008 examinations.

(Foundation Tier out of 100)

C	D	E	F	G
51	41	31	22	13

(Higher Tier out of 100)

A*	A	B	C	D	E
75	65	55	45	35	30

Component Marks

The figures given below are the minimum marks required for each component grade in the summer 2008 examination.

(Coursework 01 out of 84)

A*	A	B	C	D	E	F
76	66	56	46	37	28	19

(Paper 2F out of 44)

C	D	E	F	G
20	16	12	9	6

(Paper 2H out of 44)

A*	A	B	C	D	E
24	20	16	13	9	7

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