AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Secondary Education

Design and Technology (Graphic Products)

Specification 3543/3553

Report on the Examination
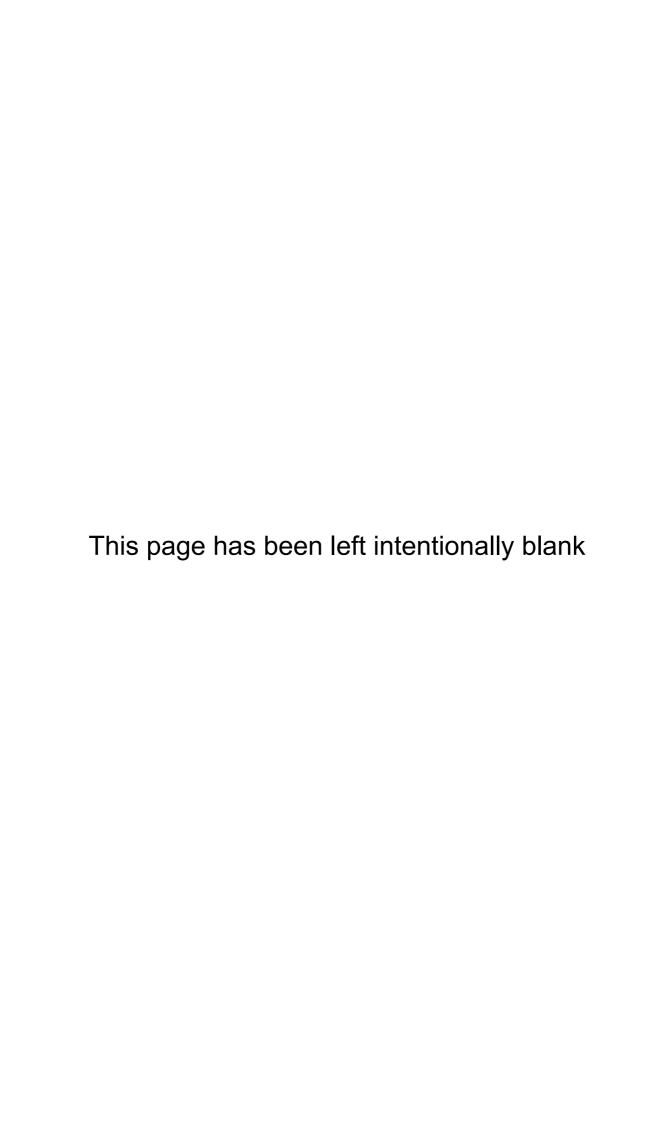
2006 examination – June series

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Introduction

Centres appear appreciate the style and layout of the paper. This year there were very few examples of students responding to questions in places other than where indicated on the paper. This year, the focus was to some extent, on uniting the progression of design development with a final presentation drawing. This presented little trouble and the clear incremental stages benefited many candidates. Candidates continued to do well on the design questions possibly due to their familiarity with project work. The quality of such work continues to improve. There were many examples of excellent and original designs on all four papers. Many examiners reported that there was increasing evidence of the use of revision websites with many instances of work incorporating design features used as exemplars on such sites. There was evidence that the Preparation Sheet has been used as intended and this benefited the candidates, however some topics appeared to be only superficially studied. The fact that many candidates do not keep the context of questions, continues to be a problem. Many responses relied on general knowledge or inspired guessing rather than on subject specific knowledge. This is frequently to the detriment of the candidate's performance. Centres are again reminded that the Written Paper is required to draw its questions from the whole Specification. As in previous years some centres appear to limit the candidates' knowledge of materials, equipment and processes to their coursework. Inevitably this places candidates at a disadvantage in the examination. The use of one-word answers is rare. However, many candidates failed to give adequate reasons and justifications in their responses. Marks allocated to each question part are clearly stated and give an indication as to the depth of response required. Usually, where several marks are available, a greater degree of understanding is required to access full marks.

Full Course (3543) Foundation

The paper was generally well answered. The time allocation was satisfactory with only a few incomplete scripts. The majority of candidates showed an ability to follow the design process but frequently demonstrated a weakness in subject specific knowledge.

Many candidates were familiar with a range of techniques and demonstrated an ability to apply them. However, the quality of written responses often lacked clarity and a depth of knowledge sufficient for higher marks to be gained. Where possible, credit was given if some understanding could be deduced.

Question 1

Almost all the candidates made a good attempt at this first question with scores of many being awarded full or near-full marks.

(a)   Candidates completed the letters to form the word 'OFFICE' but some did not successfully copy the given letter style. A small number decided to use a completely different style. Others simply failed to use a straight edge and preferred freehand. Marks were awarded according to merit.

(b)   Line quality was good. Graphic line markers were popular but felt tips or ink pens reduced the chances of a neat drawing as they tended to be smudged or of an unacceptable width. Common problems included, double lines, lines off the given grid, gaps, and poor corners. Some candidates coloured the letters which seldom added to overall quality.

(c)   Most candidates left a single space between the letters.

Question 2

This question was not well answered. Some candidates, evidently, had little basic knowledge of CADCAM and no experience of a vinyl cutter although a line drawing of a generic cutter was included on the Preparation Sheet. There was a better response in parts (b) and (c).

(a)   This was an example of sequential drawings and even if the candidates could not always represent the given stages, the quality of the sketches could be rewarded. Some candidates tried to explain a printing process.

(b)   Quality control checks were often identified but sometimes suggested at the wrong stage. It was permissible to use Stage 1 if the explanation was appropriate. The majority of candidates had some understanding and most achieved one mark.

(c)   Most candidates were aware of the use of 'Low Tack' transfer tape but answers were superficial as they failed to appreciate that it keeps the letter spacing and layout intact. By showing some understanding e.g. commenting on the relative stickiness of the adhesive, one mark could be gained.

Question 3

As expected this proved to be a well-answered question, allowing candidates to show their design and sketching ability. Candidates responded well to the structured format of the question.

The quality of responses provided a wide range of marks with all candidates picking up some reward for their effort. Some very good work was presented and the quality continues to improve.

(a)   The majority of candidates sketched an initial idea based on the 'Starting Point' picture. Most candidates developed and modified this first sketch with different degrees of progression. Whilst many stayed with variations of the given example, a few ventured into stylised drawings evolving into abstract designs usually based on the blades of the turbine. These formative sketches were usually successfully conveyed ideas to the examiners.

Very few candidates produced separate ideas or deviated from the given theme.

The quality of sketching was good. The use of felt tips presented the usual problems e.g. bleeding, unevenness.

Too many candidates spent too long on colour enhancement for the one mark allocated. Colour swatches or labels would have been adequate for these developmental stages.

The annotation was, in most cases, merely descriptive and very few candidates provided reasoned and/or critical statements that would allow full marks to be awarded.

(b)   The presentation drawings of the commemorative stamp were good and of a higher standard than the development stages. It was pleasing to note that more candidates appeared to attempt the higher skills of tonal control and shadowing than in previous years.

Many candidates benefited from a black graphic liner and a set of coloured pencils.

Most layouts ranged from adequate to good, but some candidates erased or misused the image of the Queen's head. Some candidates insisted on introducing unwanted lettering that did little to compliment the layout or even the design.

Question 4

This question was usually well answered. It was obvious that this topic was well within the knowledge of most candidates and the marks reflected this.

(a)   The most popular response was 'embossing', although the other effects listed in Table 1 were frequently named. Unfortunately, most candidates were unable to give more than a superficial reason for including it in their design. Responses tended to be descriptive of the printing effect rather than an appreciation of its contribution to the stamp's design.

(b)   Candidates often produced novel illustrations to show how 'scratch and sniff' works, in most instances representations of a nose and finger implied the action. The quality of sketching was generally good, and notes or labels showed an understanding. Although

not asked for, many candidates used colour to enhance their work and this tended to improve communication.

(c)   Another well attempted section. Magazines advertising fragrances being a popular answer together with reasons related to customer sampling, promotional issues and raising product awareness.

Question 5

This question was attempted by most candidates and a wide variation in scores were recorded with the majority in the mid range.

(a)   This was poorly attempted which few correct answers. The majority of candidates attempted to sketch corrugated board with its wavy paper inner core surmounted by sheets of thick paper, as opposed to corrugated plastic sheet. A plastic material extruded with a square longitudinal cell type construction. *(Centres are reminded that this material is listed in the Specification).* Sketches often lacked accuracy and clarity.

(b)   Most candidates attempted this question with varying degrees of success. A popular response was to attach a thread to the sign, either a single thread to the middle, or separate threads to the end of each leg. Very few candidates sketched a method of attachment or details of any components used. A way of ensuring balance was not included in many designs.

(c)   (i)   A mixed response to this section. It was either left unanswered or attempted using a halving joint construction. All attempts were placed in the required spaces on given elevations. Unfortunately the scale was not read correctly and oversized and disproportional slots were frequently drawn. There were very few correct answers.

        (ii)   British Standards presented the usual problems. Some whole centres scored well whilst others totally ignored the question. Zero marks were common.

Question 6

Most candidates attempted this question, some with a pleasing level of success.

(a)   (i)   Most candidates attempted to apply a grain effect to the base of the point of sale display, even knots were attempted. There were some excellent representations, but unfortunately common errors included inappropriate colour and even block colouring. Marks were awarded according to merit.

        (ii)   The rendering of the plastic part of the point of sale display was much weaker. Very few candidates were able to represent the transparent effect adequately. Too often a lack of reflection lines or appropriate colour was common. Too many candidates merely scribbled an 'effect' in normal grey pencil.

(b)   (i)   Very few candidates were able to give a correct understanding of the term 'bio-degradable'. Many confused it with non-recyclable.

        (ii)   This was well attempted and usually well drawn. A green, circular design with

broad arrows were the common features which candidates attempted to draw. A few candidates confused the required symbol with a design indicating 'rubbish collection' and drew a bin.

(c)   A very mixed set of responses to this question, generally whole centres attempted this or left it unanswered. This suggests to that the topic may not be being taught in some centres despite its inclusion on the Preparation Sheet.

The perspective drawing was, nor was it expected to be a construction, rather a formal sketch using a straight edge to ensure alignment.

(i)   When attempted, most candidates could identify the three named features of a one point perspective drawing. If candidates repositioned them e.g. moved the vanishing point, and if they were then correctly used, then the marking scheme accommodated this change.

(ii)   If attempted candidates usually scored well. Sometimes the block was out of proportion, frequently elongated. The rear back corner was often omitted and sometimes there was no difference in line density between construction lines and outlines. Some candidates attempted to draw an oblique drawing on the given front face. Oblique is not in this Graphic Products specification.

Question 7

(a)   (i)   A popular question but rarely answered correctly. Most attempts failed to refer to a safety reason why PVC is a good material for the sails, and unsupported responses were common.

(ii)   Again, there were many superficial responses for the advantages and disadvantages of using thin card for the sails. Answers tended to be along the lines of '…easier to make', or simply 'weak'.

(b)   (i)   Candidates were often unable to give another example of a graphic product made by the mass production process. Answers such as, stamps, national newspapers etc. were acceptable, but motor cars were not.

(ii)   A limited understanding of the process of batch production was evident. Many candidates tended to try to explain mass production from the previous question.

(c)   (i)   A popular question. The majority of candidates correctly identified a CAM machine as a vinyl cutter, a CAM1 or a cutter/plotter. This produced an anomaly when compared to the responses in Question 2 where such knowledge was tested.

(ii)   The vast majority of candidates correctly used the underlay to draw more than four sails on the given outline representing a sheet of PVC. Nearly all achieved six sails, which were well drawn and well positioned around the sheet.

(iii)   Candidates could identify the advantages to the manufacture of increasing the number of sails per sheet. Common answers gave waste reduction and economies of scale and were usually adequately explained.

Question 8

This question produced a variety of responses giving a range of marks. It provided some discrimination.

(a)   Many candidates correctly analysed some elements of the given design. The simple letter style and basic background colour were straight forward, but a sizable minority interpreted the airplane profile as a 'tick' despite the stem clearly stating it was an 'airmail' sticker.

(b)   Most candidates attempted a design which combined the features identified in part (a) ,however, many simply copied the example but made small modifications e.g. put windows in the plane, added a different text, or changed the colour. Most designs were poorly drawn and lacked precision. Many sketches were ambiguous with the central feature frequently difficult to decipher.

(c)   The evaluation of candidate's design was poor. The majority simply gave brief descriptive accounts of their design or repeated the features listed in part (a). Candidates need to be taught how to construct reasoned, relevant answers. Unsubstantiated claims never gain full marks. Statements such as 'stands out' are superficial when reference to contrasting colours, or embossing effect would allow credit to be rewarded.

Full Course (3543) Higher

There were very few questions which were without a genuine attempt at a valid response. The quality of graphic design continues to rise with many drawings, especially in the designing question were of excellent quality.

As with the Foundation Tier, the generation of ideas questions were well done and scored highly, but there was also a general lack of specific subject knowledge that prevented many candidates from attaining the highest marks.

Question 1

This was the first time that a formal question about letter style had been introduced. It was designed to allow all candidates to settle their examination nerves as well as test their ability to analyse a given letter style and then reproduce it on a different scale. It proved to be a well answered question allowing the majority of candidates to gain near maximum marks.

(a)   Almost all candidates managed to ascertain the relative proportions of the letters in the word OFFICE. A few did not appreciate the reduced length of the middle bar in the letters F and E. To some, the detail on letter C also caused a problem.

(b)   Overall the quality of presentation was generally good. Sharp pencil and graphic line markers were correctly used. Felt tips did little to demonstrate line quality as did ink lines, which were frequently smudged. Common errors included failure to keep to the given grid lines, gaps at the corners of the letters and over-shoots where lines were over extended, again at the corners. The examiners were instructed to be strict when applying the marking scheme to this section.

(c)   Very few candidates failed to keep to a one 'square' spacing between the letters.

Question 2

This question was usually well answered with many examples of good understanding of the common printing effects. It was obvious that this topic was well within the experience of most candidates and the marks reflected this.

(a)   Most candidates had a general awareness of the stated printing effects. The description of 'Scratch and Sniff' was usually well done with a clear understanding evident. Thermochromatic ink was also well understood with many perfect answers. The description of a holographic image varied greatly, with many candidates demonstrating some general awareness but few giving a sound understanding. The majority of candidates were familiar with embossing but frequently struggled to express in words. Where the meaning could be understood marks were awarded accordingly.

(b)   The most popular response was an embossed effect with many valid reasons given. These ranged from aids for the blind and partially sighted, to added dramatic interest and increased textural qualities. Depending on the quality of answer, marks were awarded accordingly.

Other given responses included all those given in part (a), but some candidates offered the equally correct 'photochromatic ink'. All were suitably rewarded as merit deserved. Very few candidates did not attempt this part of the paper.

(c)   This part was designed for the candidate to show the effects of embossing on the flat surface of a stamp, ideally as Braille. This was usually well done with a variety of drawing techniques employed to show the 3D effect e.g. isometric sketches, side elevations, high-light shading, thin and thick lines.

However, many understood the question to read 'show the process of embossing' and proceeded to illustrate the techniques of impressing images and/or Braille into the stamp. These candidates were not penalised. Marks were awarded on merit e.g. were the sketches clear and informative showing embossing and was the annotation appropriate?

Question 3

This was a well-answered question allowing candidates to demonstrate their designing and sketching skills. The novel format appeared to help candidates in their designing and the majority completed the question.

Many of the responses were of a very high quality. Centres are again to be congratulated on continuing to improve the quality of pictorial imagery. Almost all candidates took the 'Starting Point' image as it was intended to be - a start, and some developed a range of original designs often focusing on the turbine blades and/or the pylons. Unfortunately, the majority offered rather conventional variations based on the given image. Minor details were changed but the 'pastoral' scene was frequently copied. A small minority ignored the first image and suggested other types of windmills, either children's toys or traditional windmills. As these did not match the theme of 'wind generated renewable energy' they failed to gain full marks. If they then demonstrated development from the first incorrect image, marks could be gained.

(a)   (i)   The initial idea enabled candidates to select a feature from the Starting Point and try out a possible idea. Most did this by sketching a variation of the original. Where there was a degree of development, marks were awarded.

    (ii)   As the design developed by introducing new changes, high-lighting features or stylising elements of the original, then the efforts were acknowledged and rewarded accordingly. If the sketch reverted to earlier designs than full marks were not available as progression was not continued.

            The 'thumbnail sketch' allowed the candidate to consider the layout of the stamp as it evolved from a rectangular shape into its triangular format. Again a detailed, rendered drawing was not required. The word 'sketch' should have given a clue that a quick consideration of layout was all that was wanted. Most candidates provided a feasible layout which was improved on in the presentation drawing.

    (iii)   A few candidates forgot to state a special printing effect that would suit their design, even though printing effects were listed and asked about on Sheet 2. Some students were apparently confused a printing effect, with a printing method.

The development stages were intended to be quick, informative sketches rather than precise and accurate drawings. Where the images demonstrated the concept the candidate was trying to convey, marks were awarded. Felt tip pens did little to enhance ideas.

The informative sketches were expected to have some indication of colour. For the single mark is was necessary only to use labels, swatches or quick rendering rather than use quality colouring skills. By using full rendering techniques the candidate often penalised themselves by using too much time for the one mark available.

The space for the notes permitted the candidate to evaluate their designs and explain their ideas. Descriptive passages did not access the top marks, whereas, analytical comment or reasoning could be full rewarded.

(b) The presentation drawing was assessed on its own merits irrespective of the development. Graphic liners were again much in evidence and contributed to the professional look of many designs.

There were numerous examples of rendering using high level skills such as tonal control and excellent block colouring, all accessed the high mark range.

Layout confused some candidates with otherwise good designs. Their work was marred by inappropriate placement of design elements. Problems with proportion, spacing and balance were common. Some candidates, at this stage, introduced unwanted text in the form of slogan or environmental messages, which in themselves did not cause marks to be deducted but did cause problems with layout.

Question 4

The surface development (net) of the given table top promotional display was usually well attempted. Most candidates scored well on some part of this question.

(a) The outline shape was frequently well drawn with neat dark lines, and to the correct size. The scale was usually correctly used. Any orientation of the surface development was permissible e.g. whether the glue tab was to the right or left hand side.

Many candidates placed the fold lines in the correct positions and used the broken lines to represent them, as shown in the key.

The positioning and size of the triangular cut out generated a few problems. Most constructed the equilateral triangle on the correct face either with a set square, in a few instances, by compass construction. The most common error was concerned with the triangle's orientation. Examiners were instructed to reward those with the triangle's base nearest to, and parallel with the glue tab.

Unfortunately many candidates failed to label the glue tab. This was clearly given in the instructions and was intended to indicate to the examiners that feature even if the shaped, mitred, edges were omitted.

(b) A slight improvement was noted in the quality of dimensioning using British Standard conventions. Some centres obviously spend time preparing their students and so gained full credit for demonstrating and applying their knowledge. Unfortunately many were

totally unaware of the demands of this part of the Specification despite it being a regular component of the written paper over several years. Features such as leader lines, neat and correctly drawing arrow heads that touched the leader lines, solid dimension lines and the numbers in the correct position were not consistently applied. An alarming number of candidates on this higher tier paper did not attempt this section.

(c)   (i)   This was an easy mark for nearly all the candidates as they correctly identified the letters as representing Ultra Violet, even if some elaborated into the unnecessary by adding 'sun beds' or 'sun protection'.

        (ii)   Two different reasons for applying UV varnish were asked for. To gain full marks candidates were expected to do more than give a basic or superficial response. A reason or justification was necessary for full credit.

Question 5

This question was designed to allow the candidates to demonstrate their knowledge and skill when representing two basic materials used in graphic products, as well as testing the application of the basic principles of perspective sketching as stated in the Specification. There were many excellent results and most candidates had success in some part.

(a)   (i)   Most candidates rendered the given drawing to represent a wood and many were excellent representations. As the question stated '...a wood grain effect' which could be interpreted as a printed product it was not necessary to include end grain although many candidates did so. Colour and texture were usually well applied and marks were awarded according to merit.

        (ii)   The clear plastic representation proved to be more demanding and permitted differentiation within the question. Several different conventions were used often based on the method preferred by particular centres. These included reflective lines, use of an eraser to highlight reflections and architectural symbols. Most candidates attempted this section, some with a degree of success.

(b)   This part was not universally well done. The structure of the question was intended to lead the candidate to the critical points as they attempted to apply their knowledge. The desired outcome was more of a formal sketch rather than a constructed perspective drawing. The allocation of marks should have been an indicator of the level of response.

    If a detailed construction was require more time and marks would have been allocated.

        (i)   When attempted, most candidates correctly identified these three features of a one point perspective drawing. Some preferred to include their own variations e.g. move the vanishing point or alter the eye level. Where these new features were then correctly used, no penalty was incurred.

        (ii)   There were many completed drawings. The vanishing point was frequently used with accuracy, but a minority forgot to include the position of the rear left back corner, as seen through the clear plastic top.

            The quality of the line work was usually satisfactory with a clear distinction between construction lines and outlines. The depth of the point of sale display was not always in proportion to the other dimensions, but as this was a sketch rather than a construction, the examiners allowed a wider degree of tolerance.

(iii)   This part was intended to test the candidates' ability to correctly place the stamp outlines on two faces of the display. Most were able to appreciate the position of the stamp on the front face, Face A, but fewer correctly projected the base and the apex of the stamp on to Face B. There were many guesses evident.

Question 6

All candidates attempted this question and all were successful in some part. It did permit differentiation as few were correct in all aspects of the question.

(a)   Again for full marks more than a simple statement or one word answers were required. For example if a response such as, '…will not injure the child.' was offered, then more detail about the material's properties in the context of safety was required for maximum marks. References to its flexibility, softness, non-toxicity, shatter resistance qualities etc would permit the higher marks to be accessed. Unfortunately not all responses were concerned with safety and whilst the statements were undoubtedly true they were not within the context of the question.

(b)   This was the first time an under-lay had been included in this examination and many centres obviously prepared their candidates well which resulted in success. Whilst it was not a true tessellation it followed the principle of reducing waste as given in the Specification. The examiners were asked to reward layouts which had shapes that maximised the number of sails but avoided overlapping and touching. A small minority did not attempt this question.

(c)   (i)   The reasons for the coloured circles on the margin of a sheet of stamps were not always understood by the candidates. Popular misconceptions suggested that they were to do with image alignment or examples of the main processing colours. In fact they are a quality control check where the density of colour could be monitored.

        (ii)   This was a straight forward question which was almost universally correct.

Question 7

This question allowed the candidates to show their knowledge of Industrial Practices as applied to a graphic product and as highlighted on the Preparation Sheet. It was usually well answered but frequently insufficient detail was given for full marks to be awarded.

(a)   Most could correctly identify the distinctive features of Mark A and responses usually referred to the time and place of the franking/posting. Mark B proved to be slightly more problematical with country of origin, cost of posting and identification code well represented. A common error was to link the cost, 21p, with the class of postage. Whilst this was not a deliberate trap it did allow a true understanding to be appreciated. Mark C provided a wide range of responses that could be grouped under the headings of contact points and promotional details. Appropriate and justified responses were given full credit.

(b)   Responses were expected to relate to the advantages of efficiency, economy and promotion. These formed the basis of many correct answers, even if at times the justification was a little confused in its explanation. Marks were awarded accordingly.

Question 8

This question was intended to allow candidates to demonstrate a wider knowledge of the issues associated with the theme of the paper. The majority of candidates achieved some success here.

(a)   Most candidates appreciated that some cultures and philosophies were not sympathetic to the use of animal by-products in adhesives, especially when the glue had to be moistened by licking. Such responses were usually satisfactorily explained and qualified for full marks.

(b)   (i)   This was well answered with all those who attempted it managing to correctly explain the term 'self adhesive'.

        (ii)   This was a popular question but unfortunately not all candidates were successful despite the image of a book of stamps being given on the Preparation Sheet. Correct answers could have made reference to convenience – size of booklet, number of stamps, ease of use or security. Many candidates erroneously assumed that it was cheaper to purchase a book than individual stamps. Some responses reiterated part (a) and failed to be rewarded marks unless different reasons to those in (a) were clearly expressed.

(c)   (i)   This was usually well done with adequate reasoning given. All successfully recognised the 'physically handicapped' symbol.

        (ii)   The interpretation of the cost of a stamp with the additional 5p going to the charity was well understood and most realised that 30p was the cost of postage.

Short Course (3553) Foundation

This paper was generally poorly answered and the quality of work was weaker than in previous years. For the first time in several years there were many scripts with no responses to a number of questions. However, many candidates completed the paper and achieved a degree of success in all questions.

Question 1

This question was particularly well completed with many candidates scoring near maximum or maximum marks.

(a)   Accuracy was good. Some candidates did not appreciate the 'one square' thickness of the letter shapes.

(b)   The quality of line work was frequently good. Any marks lost were due to lines being off the grid lines or overshoots.

(c)   All the candidates included the correct space between each letter.

Question 2

The majority of candidates had some success in this question, but there were many weaknesses mostly to do with the process of applying a design to a product.

(a)   Many candidates who attempted this part were confused and failed to adequately represent the correct process, however the quality of the sketches could be rewarded. Some merely copied Stage 1 or drew the output from a printer.

(b)   The some candidates had little understanding and achieved one mark, but most tried to explain why rather than how quality control can be checked at their chosen stage.

(c)   Some candidates were aware of 'Low Tack' transfer tape but failed to appreciate its proper use of maintaining position of the parts and mainly referred to its reduced adhesive qualities.

Question 3

Candidates appeared to accept the change in format and responded well to its layout.

(a)   The majority of candidates used the 'Starting Point' picture.   Most candidates modified this sketch by adding new design features e.g. rivers, hills, birds. Many stayed with the given concept and few were genuinely creative in their interpretation. It was pleasing to note that only a few candidates offered separate ideas and most attempted some degree of development.

The quality of sketching was better than last year, possibly because the size of the drawings was more manageable. The use of erasers was down thus allowing better indication of colour and evidence of formative development.

(b)   As with the other papers, evaluation was disappointing with too many candidates of all abilities content to give descriptions of their designs rather than a more critical comment that would allow a greater reward. In short, the why and how were ignored in the annotation. Centres wishing to improve their candidate's grades should address this point.

(c)   The presentation drawings were generally good with neat, sharp line work.

    Colour rendering was generally satisfactory with a few creditable examples of good tonal control and excellent block colouring. The use of felt tip and metallic ink pens has almost disappeared. There were very few instances of very poor or no colour designs.

    The lay out of the stamp design was generally satisfactory with some examples achieving maximum marks.

Question 4

This question produced some responses that demonstrated a basic understanding of special printing effects. Most candidates were able to gain some marks.

(a)   Candidates were usually able to show some understanding of their selected printing method, but in the majority of cases it was confused. It did not fully explain how it would complement their design. A small number of candidates did give clear and logical responses and so gain maximum marks.

(b)   Many candidates demonstrated an understanding of how 'scratch and sniff' worked and most made a satisfactory attempt at explaining it with sketches and notes. There were many neat and tidy drawings that communicated the principles well.

Question 5

This was not a popular question and many candidates did not attempt it. Those who did make an effort, managed to score some marks although British Standards remains a mystery for many.

(a)   When attempted, many candidates did not understand what was required and drew a 'cross halving' joint rather than showing the structure of corrugated plastic sheet. Those who did try to show the correct structure tended to show corrugated board with its distinct 'wavy' paper core. Labels and notes assisted in communicating the material's characteristics and were rewarded according to merit.

(b)   This was poorly carried out. Very few candidates correctly identified the appropriate elevation and then consistently used the correct dimensioning conventions. The majority did not attempt this question despite it being a regular topic in this written paper.

Question 6

There were many satisfactory attempts and most candidates had success.

(a)   Most candidates attempted this section and successfully produced a satisfactory representation of a 'wood effect'. However, there were examples of candidates simply colouring the base in a variety of colours.

(b)   The clear plastic representation was not well done. Few candidates produced a recognisable attempt at this material. Common attempts included solid colouring and monochromatic light shading.

Question 7

When attempted, this question allowed most candidates to use their knowledge and skill. Marks were awarded according to accuracy and merit.

(a)   (i)   Reasons for the use of PVC for the windmill's sails tended to be very simplistic without explanation or justification or references to safety.

         (ii)   Alternative materials for the windmill's sails were mostly inappropriate. It was obvious that candidates had not read and understood the question. How could wood, copper, aluminium, or another plastic be suitable for this toy? Some candidates did identify card or thin board as a suitable material and then went on to explain its relevant properties to make it appropriate.

(b)   (i)   Another 'scale of production' was usually correctly given, with mass production being the most popular response.

         (ii)   The majority of candidates who attempted this part did not give a correct graphic product, but named an inappropriate item e.g. cars, pencils.

(c)   (i)   Many candidates attempted this question, most with success. It was well understood and the majority drew the maximum number of sails as six. However, some presented layouts of seven or eight as the maximum number that could be cut from the given material, and were rewarded accordingly. Neatness was in all cases good.

         (ii)   Most candidates correctly confirmed the number which they had planned out in part (i), but some ignored this straightforward mark and did not complete the question.

(d)   (i)   Nearly all the candidates understood that 'green' issues referred to environmental topics, but the explanations were often confused, highly specific by being single issue concerns, or ambiguous.

         (iii)   Not many responses were sufficiently clear and correct for maximum marks. Too often too little detail and vague generalisations were offered. Popular answers hinted at harm to the environment but failed to suggest why it was harmful.

Question 8

(a)   Many candidates failed to respond correctly and did not extract the major features from the example provided. It was expected that the simple letter style, a 2D image of the airplane and a blue background would have formed the specification for another sticker in the same style. However, few recognised and recorded these features.

(b)   Of those candidates attempting this part some simply copied the example, re-positioned the image and the text, or did not use the same style. Many designs were poorly drawn and lacked precision.

(c)   The evaluations were poor and superficial. Simple descriptions were common, statements such as, 'I have drawn an airplane' were not rewarded marks. This aspect of designing should be addressed by centres.

Short Course (3553) Higher

The paper allowed the majority of candidates to attempt all questions, and skills and knowledge were applied effectively. There were very few blank sheets. Designing, rendering and general annotation continues to improve.

Question 1

This was particularly well done with many candidates scoring maximum or near maximum marks. Accuracy and neatness was that expected from Higher Tier candidates.

(a)   Overall, accuracy was good with the correct letter style reproduced. A minority did not fully appreciate the length and position of the centre bars in the letters F and E, and the detail on the C was frequently omitted.

(b)   The quality of line work was generally good, but some carelessness was evident when following the given grid lines and when completing the outline of the letters. Gaps, overshoots and double lines detracted from the overall impression.

(c)   Almost all the candidates appreciated that a space of one 'square' was required between each letter.

Question 2

(a)   As in the other papers, this section was well attempted. Most candidates demonstrated an awareness of the required special printing effects. The holographic and the embossed image presented most difficulties when describing them. Wherever understanding could be deduced, credit was given.

(b)   Another popular question. Most candidates successfully selected an appropriate printing effect from part (a) and gave appropriate reasons for including it in their design. Unfortunately a small minority reiterated the same reason as they gave when describing it in part (a). These seldom accessed full marks because of this repetition.

(c)   This was well done with a sound understanding of what was required. Neat sketches which showed 'Braille' type, 3D effects were usually well rewarded. Notes and annotation were well focused and helped the candidate to communicate their ideas. As with the other papers, the marking scheme allowed credit to be given if the candidate had described the process of embossing rather than showing a detail of embossing on a stamp.

Question 3

This was a well-answered question. Many candidates achieved near perfect marks. All candidates demonstrated their designing and skills. The structured layout of the page appears to have assisted them when presenting their development of a design. There were very few separate and discrete ideas for the stamp design.

Many of the responses were of a high quality. Almost all candidates took the 'Starting Point' image as it was intended to be, a start, and from it developed a suitable design. Unfortunately, many offered variations based on the given photograph. Some details were changed, hills, a river

or birds added. Some placed their turbines in the bottom of valleys. A few took a more imaginative approach and offered stylised representations of pylons, turbine blade or generator pods. A small number ignored the photograph and used a child's toy windmill. This did not match the theme of 'wind generated renewable energy' thus they failed to gain full marks. If they then demonstrated development from the first incorrect image, marks were awarded.

(a)   (i)   The initial idea enabled candidates to select a feature from the Starting Point and try out a possible idea. Most did this by sketching a variation of the original picture. Where development was evident, marks were awarded.

(ii)   As the design developed then the efforts were acknowledged and rewarded. If the sketch reverted to an earlier design than full marks were not available as progression was not continued. The quality of pencil work was generally acceptable, and colour usually indicated, although those candidates who insisted on using 'felt tips' rarely convinced the examiners that their work merited maximum marks.

The 'thumbnail sketch' allowed the candidate to consider the layout of the stamp as it evolved from a rectangular shape into its triangular format. Most candidates provided a feasible layout that was improved on in the presentation drawing.

(iii)   A few candidates forgot to state a special printing effect which would suit their design. Some students were confused and recorded a method of printing rather than a printing effect.

The development stages were intended to be quick and informative sketches not finished presentation drawings, most met this criterion. By using full rendering techniques the candidate often penalised themselves by using too much time for the one mark available.

The space for the notes permitted the candidate to evaluate their designs and explain their ideas. Descriptions of their designs did not access the top marks, but analytical comment and justifications could be full rewarded.

(b)   The presentation drawing was assessed on its own merits irrespective of the developmental stages. There were numerous examples of excellent rendering using high level skills such as tonal control and very good block colouring; all accessed the high mark range. Many candidates came to the examination equipped with graphic liner pens and when used correctly they did much to enhance the quality of the final drawing.

The layout confused some candidates. Problems with proportion, spacing and balance were common. Some candidates, at this stage, introduced unwanted text e.g. slogans, which detracted from the otherwise acceptable designs configurations. Some lacked basic simplicity as they were 'cluttered' with unnecessary detail.

Question 4

This familiar topic was well attempted and many candidates scored well on part (a) but less so on part (b).

(a)   The outline of the promotional display was usually accurate and neatly drawn. The scale was correctly used by most candidates. Any orientation of the surface development (net) was allowed e.g. the glue tab on the right or left hand side.

Many candidates placed the fold lines in the correct positions and used the given convention. A few omitted the base fold line and the glue tab fold was frequently drawn as a continuous line. Both faults prevented maximum marks being awarded.

Unfortunately many candidates failed to identify the glue tab.

(b)   As in previous years the correct use of dimensioning conventions continues to baffle many candidates, e.g. leader lines, correctly drawing arrow heads touching leader lines, continuous dimension lines with numbers in the correct position were not consistently applied. Examples of the correct method of dimensioning are available in most graphic books. A disappointing number of candidates on this higher paper did even not attempt this part.

Question 5

This question was designed to allow the candidates demonstrate their skill when representing two materials used in graphic products. There were many very good results and most candidates had some success.

(a)   Most candidates rendered the given outline to represent wood and many were successful. As the question stated 'wood grain effect' which could be interpreted as a printed product it was not necessary to include end grain. Colour was usually well applied and marks were awarded according to merit.

(b)   The clear plastic proved to be more demanding. Several conventions were used as favoured by individual centres if they were recognised as an illustrative technique they were rewarded according to effectiveness of the candidate's application. These included the use of reflective lines, an eraser to highlight reflections on a shaded surface and conventional architectural symbols.

This was generally poorly answered with depth of answer rarely sufficient to qualify for full marks.

Question 6

This question tested the candidates' knowledge of common graphic product materials, and relates them to a given situation. Many answers were correct in their own right but were not in the required context.

(a)   (i)   The context was a 'small hand held toy windmill given to children' - this should have implied health and safety considerations so plastics suggested by candidates must fit this situation. Hence, soft and compliant sheet plastics were permissible; while hard more resistant or brittle materials were inappropriate. High Impact Polystyrene Sheet (HIPS) is acceptable but acrylic is not. This is an example of a rare question where a one word answer is permissible e.g. acetate.

(ii)   The answer must connect thin plastic sheet to safety for its use in a toy windmill. If candidates answered in general terms e.g. 'will not injure or cut the child.' then more detail was required for maximum marks. Reference to flexibility, softness, non-toxicity, shatter resistance qualities etc, would permit the higher mark to be accessed.

(b)   Many materials and their properties were suggested but they had to be in context of the question. Materials such as card and thin board were accepted but other plastic materials were not. Likewise, paper is an unsuitable material, as it would not stand up to the demands of a toy windmill. Whichever materials were offered must possess appropriate physical properties e.g. strength, lightness, easy to shape, or other qualities peculiar to a toy e.g. easy for the child to draw on or decorate, non-toxic, readily available.

(c)   (i)   This was well answered with all those who attempted it managing to gain some reward. As with other questions, to achieve maximum marks reasons were required. Responses tended to focus on the convenience and hygienic qualities of books of stamps. All answers were rewarded as merit demanded.

(ii)   The reason why self-adhesive stamps are provided on shiny waxed paper is well understood by the majority of candidates and was clearly explained.

Question 7

(a)   Most could correctly identify the distinctive features of Mark A and popular answers referred to the time and place of posting. Mark B was more difficult with fewer correct answers and cost of posting appearing most often. A common mistake was to suggest that it referred to a second class stamp. Mark C provided a range of different responses usually implying details of the sender. Appropriate and justified responses were given full credit. Some candidates did not follow the instruction and did not always give the correct meaning to the right mark. A minority also gave similar answers to the different marks.

(b)   This question required the candidate to study the given Mark C and draw a new design in the same style e.g. simple text, monochromatic and with a wind farm image. There were many successful designs presented and most scored well.

(c)   As in other parts of the paper many candidates correctly stated an advantage but failed to give a valid reason for their choice. Most advantages usually referred to advertising or giving a return address.

Coursework (3543/C and 3553/C)

A higher proportion of centres awarded levels that were in line with AQA standards during 2006.

It is essential that centres entering candidates for this Design and Technology Specification guide candidates in their selection of design brief /design situation. Suitability of the project can be verified by the centre's coursework adviser.

All candidates must address the three assessment objectives in their coursework assessment. Scope must be provided by the candidate's brief to design and manufacture a product or range of outcomes that will address the assessment objectives. The outcomes should also be manufactured predominantly from compliant materials.

Architectural models – candidates are tending to focus upon the creation of a model, their research focuses upon materials that are needed to create a model. Candidates need to appreciate that the model is a method used to enable a third party to interpret the ideas of the designer.

Many centres now link the architectural model to the launch of a new corporate identity or link the model to a promotional activity. This is seen as good practice and enables the candidate to address the three assessment objectives. It is essential that centres undertaking this type of project ensure that their candidates cover the three assessment objectives.

Evidence of some 3D outcomes presented by individual candidates, did not appear in the candidate's design folder, with no development or recognition of what or how their product would be manufactured being included in the design submission. The candidate's 3D outcome/s should evolve through the candidates design work.

Design Folders

Research

- Many centres are now encouraging candidates to create concise design folders, only including relevant and appropriate research.

- Some centres are still rewarding candidates for generic research sheets that have no bearing on the final product being developed. Centres are treating this section as a didactic teaching exercise, with candidates submitting identical sheets, regardless of their task.

- Some centres have started to encourage candidates to only carry out research when it is needed; this is taking place throughout the design process and is recognised as good practice.

- Questionnaires and the recording of client/user needs do provide a designer with essential pieces of information. However, it is essential that a candidate carries out analysis of this information. This could and should also influence the design specification. Candidates must ensure that the focus of their questions are related to the Design Situation being covered by the candidate
- Care must be taken when downloading reams of information from Internet Sources – candidates need to filter this evidence, distilling the key pieces of information and

recording only the relevant information to their design task. This can often be recorded with reference to a website/page. The key points are then analysed in the candidate's submission.

- Some candidates are triple mounting downloaded information; this is not an appropriate task or use of time in this focussed GCSE specification.

- Disassembly of existing products is being used successfully in many centres. This aspect of research has a focus and encourages the candidate to address their design situation from a commercial perspective. This provides a valuable method of analysing products and can also be rewarded as a relevant industrial practice.

Analysis (of problem/task and research)

- More able candidates realise the advantages that can be gained by following a careful analysis of their problem, task and research.

- This analysis then prompts a more relevant activity in the designing skills section when candidates have adopted this approach.

- Some candidates do draw conclusions gained from their research; this information is then used to formulate a design specification.

Specification

- An area of improvement in many centres. Candidates have been able to identify the requirements of their product.

- The design specification is a useful design tool that is being used to create a focus for the evaluation of the candidate's product/s.

- Some candidates are still focussing on the Process they are going through, rather than concentrating on the product.

Generation of Ideas

- This year saw an improvement in some centres, with candidates providing evidence that they had considered a range of potential ideas.

- Some candidates are only attempting simplistic outcomes that do not stretch candidates entered for this GCSE course.

- It is essential that candidates appreciate that when they are using ICT as the platform for creating their ideas, they must record and publish the incremental changes they are proposing.

- When only a finished image or solution is provided for the moderator, it is difficult to reward the candidate; often these pieces of evidence are completed to a professional standard and cannot gain the reward that the candidates deserves, if the centre or candidate cannot show how the ICT has been used.

- Often this is the best evidence in a candidate's folder.

- Some centres are utilising a wide variety of resources.

- When nets etc are downloaded from a commercial CD, this must be acknowledged by the candidate. It is acceptable to use these as starting points, however when candidates are rewarded the higher grades they are expected to at least amend or adjust these commercial products. The candidate's amendments need to be recorded and presented for moderation in the candidate's design folder.

- Many centres and individual candidates are prototyping/modelling potential ideas at an early stage of the design process and in most cases this has proved to be a useful exercise. It also prompts minor modifications/improvements.

Development of solution

- This section needs to be more than just a net of a Final Piece of packaging or a working drawing, either annotated or drawn out in orthographic projection.

- Incremental modifications/improvements should form a key element of this designing skill, leading to a series of drawings that would enable a 3rd party to manufacture the product/s.

- Some candidates just regurgitated their earlier drawings, not showing any development or refinements that could be incorporated into their proposal.

- Many successful candidates integrated hand drawn and ICT techniques into this section.

Planning of making

- Many candidates have started to appreciate that this is not a retrospective exercise.

- Candidates are planning out their construction, taking into account industrial elements - just in time, and also planning that takes into account QA /QC elements.

- Flow charts have been seen in many centres, with candidates introducing feedback and QC elements into their systems.

- Some candidates provided no evidence of planning, yet they were rewarded for this section by the centre. This has a major impact when the holistic grade is awarded.

Evaluation, testing and modification

- Effective evaluations focus upon the product, rather than looking at the process covered either in the project or the whole GCSE course.

- A candidate's evaluation needs to focus upon the success of the final product/s. Does it match the design brief/design specification and would it match the client's requirements?

- Many candidates had failed to address the two other sub-sections in this skill – testing of their product or recording modifications that could be made to improve the next generation of the candidates design solution.

Use of communication, graphical and use of ICT skills

- Centres need to appreciate that candidates need to exhibit a range of graphical skills.

- A design folder or candidates submission is required to show a balance between hand drawn graphical techniques and ICT generated work.

- There seems to be reliance upon 2D drawing, many candidates are not even attempting 3D drawings to illustrate their ideas.

- Some candidates are still using oblique projection as a system of recording their ideas, this drawing style does not form part of this Key Stage 4 specification.

- Some centres are encouraging candidates to use a wider range of drawing techniques, orthographic drawing has been seen in a larger number of centres this year, both hand drawn and also drawings generated through ICT packages.

- The increase in Prodesktop has been witnessed in many centres. This provides candidates with an opportunity to model and amend their proposal. Before transferring their working drawings onto relevant CAM facilities, again it is essential to record the incremental changes made when using this program.

Social issues, Industrial practices and systems and control (including the use of CAD)

- A key element of the specification is to design and manufacture the final product in quantity. Many candidates are not taking this key tenet into consideration when developing their products.

- Many centres are just providing generic sheets that relate to this element, with minimal connections to the design situation.

- In some centres, candidates are able to integrate this key element into all sections of their design work. This is seen as good practice. It is essential when this approach is adopted that the teacher annotation points out where the best evidence is located in the candidate's submission.

- Many, generally lower ability candidates ignored this section completely.

3D Outcomes

The vast majority of outcomes presented for this GCSE this year were constructed from appropriate materials. Candidates and centres are appreciating the rigour required to enable the higher grades to be rewarded. A range of products is needed in many cases that will enable the candidate to exhibit a range of making skills. This needs to be linked to the creation of quality products.

Correction of working errors (where needed) including modifications

- Only a minority of candidates covered this section explicitly. Many centres awarded high levels for this section, with no evidence presented. A candidate needs to justify as well as record any working errors in order to achieve higher than a Grade C for this making skill.

- Some centres used prototyping/modelling as a technique to check the feasibility of candidate's ideas; modifications/changes were then incorporated into a final product.

Use of appropriate equipment and processes (including the use of CAM)

- The vast majority of centres used a range of appropriate materials, equipment, and processes to produce an effective outcome/s.

- There has been a significant increase and a wider range of applications where CAM has been used; this has often enhanced the quality of the finished product.

- Good evidence of prototyping/modelling was provided by many candidates – this enriched the number of processes covered as well as enabling the candidates to use a wider range of materials and processes.

- There are however still some centres that are allowing candidates to submit stand-alone Architectural Models – these do not address the three assessment objectives covered by a Design and Technology prefixed GCSE course.

- Architectural models need to be supported by a range of products that address the three Assessment Objectives. The actual model should be seen as a device that would enable a third party to appreciate what or how the corporate identity addresses the design brief.

Production and effectiveness of outcome

- Some candidates opted to make outcomes that lacked the rigour and challenge needed for the higher grades; they often precluded themselves from the higher grades.

- Many candidates produced effective products, often completed to a professional standard; these exhibited a complexity of construction and showed a high level of finish.

Level of accuracy and finish

- There was a general improvement in this element this year partly due to the increase in the use and application of CAM equipment.

- Where foam coreboard is used, some candidates failed to provide a suitable edge finish.

- When modelling block foam is used, candidates need to pay attention to the standard of finish.

- The finish of products in many cases has affected the holistic assessment of a candidate's making skills.

Use of Quality Assurance (QA) and Quality Control (QC)

- Candidates have often referred to this element in their design folder; however they have not applied this check to their making.

- The best evidence for this section was often witnessed in the planning of making.

Administration

- Plastic Wallets should not be used. They are often heavy, expensive to post and often contain more than 2 pages per leaf – key evidence can be missed.

- Centres with less than 20 candidates are reminded of the need to post **all** of their design folders including annotation, to the moderator by 5th May.

- Some centres are very efficient in turning around the folders, once the moderator has requested a sample – other centres are taking up to two weeks.

- Centres appreciated the need to ensure that all Candidate Record Forms are signed both by the teacher and the candidate.

- In many cases the CRFs were annotated in a helpful way.

- Some centres are only providing a total mark for each candidate. No breakdown is included for the designing and making skills. The minimum that should be provided is a grade for each section of designing and making; this is to be recorded before the holistic assessments are made.

  (Assessment procedure included on Page 49 of the Specification)

- The vast majority of centres provided the evidence in secure folders, however there does seem to be a number of centres that are posting candidate's work that is just wrapped loosely by an A3 sheet of paper or a paper clip. This is not seen as an effective method of ensuring that a candidate's work arrives at a moderator in a secure condition. The recommended method of securing sheets of design folders is using a treasury tag.

- Centres appreciated the need to standardise work within the centre. There were only a small minority of centres that failed to create an accurate rank order for their cohort of candidates.

- When a visit is made to a centre, the candidates' making elements need to be laid out in the overall rank order, not the rank order of the making element.

Short Course

All of the points outlined in the Full Course are also applicable to candidates and centres with entries for the Short Course.

- During this year's moderation period, the moderation team have been impressed with the exceptional levels of Graphics exhibited by some candidates taking this GCSE short course.

- It must be remembered that candidates entered for the short course, still need to address all of the assessment objectives outlined in the subject's specification. The Candidate's Record Form includes all of the Designing and Making Skills; if a candidate addresses all of these elements, they will have covered the three assessment objectives.

- With the short course, there were some problems with the system used for recording the grades achieved by individual candidates.

Many high level projects were created by the cohort of candidates taking this GCSE during 2006.

The moderating team are grateful to centres for allowing a selection of candidates work to be used as exemplar material. This appreciation is also extended to centres who have allowed candidates work to be used for the award meetings.

Mark Range and Award of Grades

Full Course

Foundation tier

Component	Maximum Mark (Raw)	Maximum Mark (Scaled)	Mean Mark (Scaled)	Standard Deviation (Scaled)
Paper	125	140	64.5	18.6
Coursework	95	210	107.8	40.9
Foundation tier overall 3545/F	--	350	172.4	50.6

		Max. mark	C	D	E	F	G
Paper boundary mark	raw	125	85	72	59	46	33
	scaled	140	95	81	66	52	37
Coursework boundary mark	raw	95	60	48	36	24	12
	scaled	210	133	106	80	53	27
Foundation tier scaled boundary mark		350	216	179	142	105	68

Higher tier

Component	Maximum Mark (Raw)	Maximum Mark (Scaled)	Mean Mark (Scaled)	Standard Deviation (Scaled)
Paper	125	140	89.8	15.6
Coursework	95	210	165.6	32.9
Higher tier overall 3545/H	--	350	255.4	41.5

		Max. mark	A*	A	B	C	D	allowed E
Paper boundary mark	raw	125	101	95	89	83	69	-
	scaled	140	113	106	100	93	77	-
Coursework boundary mark	raw	95	95	84	72	60	42	-
	scaled	210	210	186	159	133	106	-
Higher tier scaled boundary mark		350	314	287	256	226	183	161

Provisional statistics for the award

Foundation tier (20 229 candidates)

	C	D	E	F	G
Cumulative %	19.9	48.3	70.4	85.2	94.1

Higher tier (29 781 candidates)

	A*	A	B	C	D	allowed E
Cumulative %	5.3	25.2	53.5	78.0	94.7	97.3

Overall (50 010 candidates)

	A*	A	B	C	D	E	F	G
Cumulative %	3.2	15.0	31.9	54.5	75.9	86.4	92.4	96.0

Short Course

Foundation tier

Component	Maximum Mark (Raw)	Maximum Mark (Scaled)	Mean Mark (Scaled)	Standard Deviation (Scaled)
Paper	100	120	50.3	14.9
Coursework	95	180	81.9	35.2
Foundation tier overall 3555/F	--	300	132.2	43.4

		Max. mark	C	D	E	F	G
Paper boundary mark	raw	100	54	47	40	34	28
	scaled	120	65	56	48	41	34
Coursework boundary mark	raw	95	60	48	36	24	12
	scaled	180	114	91	68	45	23
Foundation tier scaled boundary mark		300	173	144	115	86	57

Higher tier

Component	Maximum Mark (Raw)	Maximum Mark (Scaled)	Mean Mark (Scaled)	Standard Deviation (Scaled)
Paper	100	120	84.6	12.3
Coursework	95	180	142.0	27.8
Higher tier overall 3555/H	--	300	222.6	35.6

		Max. mark	A*	A	B	C	D	allowed E
Paper boundary mark	raw	100	86	79	72	66	52	-
	scaled	120	103	95	86	79	62	-
Coursework boundary mark	raw	95	95	84	72	60	48	-
	scaled	180	180	159	136	114	91	-
Higher tier scaled boundary mark		300	278	251	222	193	153	133

Provisional statistics for the award

Foundation tier (333 candidates)

	C	D	E	F	G
Cumulative %	17.7	38.7	59.2	76.6	89.5

Higher tier (648 candidates)

	A*	A	B	C	D	allowed E
Cumulative %	5.1	27.8	58.8	83.3	95.8	97.2

Overall (981 candidates)

	A*	A	B	C	D	E	F	G
Cumulative %	3.4	18.3	38.8	61.1	76.5	84.3	90.2	94.6

Definitions

Boundary Mark: the minimum (scaled) mark required by a candidate to qualify for a given grade.

Mean Mark: is the sum of all candidates' marks divided by the number of candidates. In order to compare mean marks for different components, the mean mark (scaled) should be expressed as a percentage of the maximum mark (scaled).

Standard Deviation: a measure of the spread of candidates' marks. In most components, approximately two-thirds of all candidates lie in a range of plus or minus one standard deviation from the mean, and approximately 95% of all candidate lie in range of plus or minus two standard deviations from the mean. In order to compare the standard deviations for different components, the standard deviation (scaled) should be expressed as a percentage of the maximum mark (scaled).

Uniform Mark: a score on a standard scale which indicates a candidate's performance. The lowest uniform mark for grade A* is always 90% of the maximum uniform mark for the unit, similarly grade A is 80%, grade B is 70%, grade C is 60%, grade D is 50%, grade E is 40%, grade F is 30% and grade G is 20%. A candidate's total scaled mark for each unit is converted to a uniform mark and the uniform marks for the units will be added in order to determine the candidate's overall grade.