DESIGN AND TECHNOLOGY

Paper 9705/01
Written 1

General comments

This was the first examination in which the new format for this paper had been used.

The performance of candidates was very mixed and ranged from poor to the very good. It was evident that in some cases candidates had only limited knowledge and understanding of the subject matter they had chosen to answer.

Time management proved to be a problem for some with a number of candidates failing to complete all of the parts of the question they had chosen to answer in ***Section C***.

A good deal of repetition was seen in candidates' answers to questions in all sections of the paper. Some drew the same thing more than once using a different form of drawing. For example, a design was drawn as a three-dimensional view and then repeated using a two-dimensional view but giving no more detail than the first drawing. A common error in written responses was for candidates to repeat the same point using slightly different words.

Candidates must make sure that their answers are focused on the question being asked and that responses are concise and display a sound subject specific knowledge. In this examination a number of candidates relied too heavily on general, rather than subject specific, knowledge and understanding to answer questions.

Section A

The better answers in this section were those that used a sequence of three or four annotated sketches to explain clearly how the appropriate tools, equipment and processes are safely used to achieve the required results. It is not sufficient to just draw or list the tools, they must be shown in use. The use of lots of continuous text should be avoided when answering questions in this section.

Question 1

In part **(a)** the majority of candidates suggested a suitable sheet material for making the figure. Correct answers included aluminum, acrylic and mild steel.

Suitable reasons for choice included the fact that the material could be easily bent or, in the case of aluminium and acrylic, required no surface finish. A good number of candidates gave responses that were too general such as 'the material is easily available' or 'it is easy to work'. Answers such as this could apply to many materials.

Part **(b)(i)** required candidates to use sketches and notes to describe how to cut out the shape of the figure. Almost all candidates showed at least some understanding of how the process could be carried out but some of the methods were not totally appropriate. For example some suggested that a hot wire cutter could be used to cut out acrylic. Others suggested than an angle grinder could be used to shape the metal (when this material had been chosen). This would not have be the safest or most accurate way to achieve the required shape.

In part **(b)(ii)** a number of good answers were seen which showed how the balancing bar could be attached to the figure so that it could be easily removed. The most appropriate solutions were those that had small hooks or supports attached to the figure on which the bar could rest.

A number of candidates incorrectly suggested permanent joining methods such as soldering and welding.

Only a limited number of fully correct answers were seen to part **(b)(iii)**. Most candidates failed to show any real understanding about how a die would be used to cut a thread on the end of the support.

Question 2

This proved to be the most popular question in this section.

In part **(a)** most candidates named a suitable sheet material for making the top of the box, with MDF and acrylic being the most popular correct answers. Same candidates gave too simplistic answers such as 'cheap' and 'readily available' when it came to reasons for their choice. Appropriate reasons included the fact that the material was stable and would not warp and in the case of acrylic came ready coloured.

Part **(b)(i)** required candidates to explain how the comb joint would be marked out. Some candidates spent too long trying to explain how templates could be made and used in the marking out process. Others wrongly suggested that just a rule and pencil were required. Some went through the whole process without making any reference to size or measuring. The better answers correctly explained how the joint would be marked out using rule, pencil or marking knife, try square and marking gauge.

A number of inappropriate tools were suggested in part **(b)(ii)** when it came to making the comb joint. These included hacksaws, files and circular saws. Some candidates even suggested that the whole process could be done using a chisel. Even when the correct tools were identified their use was often not explained, with a good number of candidates doing little more than draw tools and make simplistic statements such as 'you would use a saw'.

Part **(b)(iii)** was in general poorly answered. While a number of candidates correctly identified that the groove around the top of the box could be produced using a router far fewer explained how it would be used or the safety precautions that would need to be undertaken. Few explained that a plough plane could be used. A common response was to suggest that a circular saw could be used. While this is a workable method it has major safety implications. Some candidates incorrectly stated that that the groove could be made by adding extra pieces of wood to the top edge. Another common error was to describe how the groove could be made using a saw and chisel.

Question 3

This was the least popular question in this section of the paper.

In part **(a)** very few candidates were able to demonstrate any knowledge about different types of card and why they would be suitable for the given situation.

A number of good answers were seen to part **(b)** of the question. However a number of errors were seen such as developments that did not have a glue tab, the 'window' not being included or the sleeve being closed at one end.

Part **(c)** of the question was not answered by some candidates. While a few excellent answers were seen most responses were very superficial and showed very little understanding of CAD technology.

Generally part **(d)** of the question was answered better than part **(c)** with a good proportion of candidates being able to demonstrate at least some understanding about how the plastic moulded tray would be made using vacuum forming.

The better answers used a sequence of three or four annotated sketches to clearly explain stage by stage how the process would be carried out.

Section B

The questions in this section of the paper require candidates to analyse products, identify and resolve problems and discuss issues related to the design, manufacture, use and disposal of products.

The major weakness in many answers related to the poor levels of 'discussion' that took place in candidates' responses.

Future candidates would be well advised to structure their answers around the instructions given in the questions.

Candidates need to identify relevant issues, discuss why they are important and be able to support their arguments using appropriate examples and evidence.

A good deal of repetition was seen in candidates' answers to part **(d)** of the questions. A frequent error was to give the same information two or three times using slightly different words.

Question 4

This was the most popular question in this section.

In part **(a)** a number of candidates confused wattage with voltage.

Correct answers needed to explain how the use of a bulb where the wattage was too high could lead to the lamp being damaged.

In part **(b)** most candidates were able to identify correctly at least one problem with Design A. They explained that the shade could get hot and cause safety problems when people touched it or tried to pick it up. Another common correct answer related to the electrical safety of the lamp. Safety problems could arise if the wiring became damaged and live wires came into contact with the metal.

Answers to part **(c)** were often too short and simplistic to gain high marks. Correct answers needed to relate to improved insulation of both the heat from the bulb and the electrical current. While many candidates identified these two issues fewer offered full explanations as to how this could be achieved. It is perfectly acceptable to use sketches to aid the explanations and many of the better answers used this method.

When it came to answering part **(d)** many candidates failed to make use of the structure that had been given in the question.

A good number of candidates did little more than describe the three lamps. The better answers analysed what features were required make a good desk lamp (part **(i)**), went on to discuss why these features were relevant (part **(ii)**) and discuss how well or badly the three given designs would function when judged against these features. A justified choice of the best design was then made (part **(iii)**).

Question 5

This was the least popular question in this section.

In part **(a)** the majority of candidates were able to explain that the design feature shown at A joined the braking system to the bicycle and acted as a pivot allowing the two arms to move simultaneously resulting in the brake blocks gripping onto the wheel rim.

In part **(b)** most candidates were able to identify correctly at least one problem that could occur with the brakes when they had been used for a long time. The most commonly identified problems related to the brake pads wearing down and the cable stretching.

While a fair number of good answers were seen to part **(c)** some responses were too simplistic. For example 'you could replace the brake pads' without going on to explain how the design of the braking system allowed this to be done. The better answers frequently made use of sketches to aid this explanation.

In part **(d)** some candidates failed to focus their responses around the requirements of the question. In theses cases candidates tended to give lots of general information about mountain bikes and mountain biking rather than structuring their answers around the factors involved in the choice of materials for a mountain bike. A lot of repeated information was evidenced in answers to this part of the question.

The better answers were those where the given information had been analysed and the properties that that materials would need to have in order to make them suitable for the given situation identified. For example strength/durability, lightweight, ease of maintenance (part **(i)**). Discussion then had to take place as to why the properties identified in **(i)** were relevant when designing a mountain bike (part **(ii)**). By then discussing how the materials listed in the question meet the property requirements established in **(i)** and supporting their answers with appropriate examples and/or evidence, candidates were able to address the requirements of part **(iii)** of the question.

Question *6*

Part **(a)** of this question was generally well answered with the majority of candidates correctly explaining that the design feature shown at A made it easier to open the box by putting a finger into the cut-out to lift the lid.

In part **(b)** the majority of candidates were able to identify at least one of the problems associated with the top of the box. The main problems were that the box would not stay closed and it did not protect the contents very well.

While in part **(c)** a limited number suggested inappropriate improvements to the box such as adding a handle or window to the design, many candidates realised that the box needed to have more fold-over flaps added and the existing flap needed to be enlarged. However, some responses were too simplistic. For example 'more flaps could be added' without saying how many, where they needed to be placed or how large they needed to be. The better answers made use of sketches to illustrate the improvements that needed *to* be made to the top section of the box.

In general part **(d)** of the question was poorly answered with many candidates talking about general recycling issues rather than focusing on how health and safety issues are addressed when re-cycled card to package food products.

Candidates needed to analyse the situation and establish the potential problems linked with using re-cycled card for packaging food products. Issues such as avoiding direct contact between the food and the card needed to be identified in order to cover the requirements of part **(I)**.

Discussion then needed to take place to explain why the issues identified in **(i)** were relevant. For example if food came into direct contact with the recycled card it could become tainted. (part **(ii)**).

Ways in which these health and safety issues could be overcome needed to be explained and discussed with arguments being supported by using specific examples and/or evidence. For example the card could be coated in some way or secondary packaging used as in the case of the plastic bag inside a card cereal box. (part **(iii)**).

Section C

The quality and amount of work produced in this section was very mixed. While some excellent design and presentation work was seen there were some fundamental errors in the way that some candidates responded to the requirements of the questions in this section.

Common errors were to present only one design idea or to produce several drawings that gave the same information but in a different form, for example drawing both a 2D and 3D view showing exactly the same design idea.

Ideas were frequently not evaluated in a meaningful way. Candidates should use quick, free flowing sketches to produce around three distinctly different ideas or part ideas for each part of the question. These should be evaluated, developed and design decisions made.

Some candidates spent a long time producing very 'neat' drawings or explaining stage by stage how a design would be made. While basic details about materials and construction are required candidates do not have to explain the whole production process.

In part **(e)** of the questions many candidates failed to render their drawings. A good deal of inappropriate 'colouring in' was seen. It should be remembered that rendering requires candidates to use colour, shading and texture to enhance the three dimensional appearance of a product and to represent the materials from which it is made.

Poor time management was an issue with some candidates. They spent too long on the earlier parts of a question, leaving themselves with insufficient time to complete the whole question.

Errors of the type mentioned above severely restricted the number of marks available to some candidates.

Question *7*

This was the most popular question in this section of the paper.

Part **(a)** of the question was generally answered well with many candidates establishing that a system using a nut and bolt would be an effective way of attaching the axle beam to the go-cart. The better answers showed how the design could be improved by the use of washers and locking nuts to reduce friction and avoid the two parts working loose.

In part **(b)** two features had to be considered. How to attach the wheels to the axle and the axle to the axle beam. Some candidates only produced design ideas for one of these features. A good number of workable designs were seen. Some of the better ideas were based on brackets being used to fix the axle to the beam and a thread being cut on the end of the axle with locking nuts preventing the wheel coming off.

Part **(c)** was frequently poorly answered with many inappropriate designs being seen. A good number of candidates drew chairs and stools that were more suitable for household use rather than as seats for a go-cart. Stability would have been a major issue with many of these designs. In many cases candidates failed to give sufficient details about how the seat would be attached to the go-cart.

Part **(d)** was in general poorly answered. Many designs were far too complex for the given situation, with some candidates even suggesting that the braking system show in question 5 could be used.

The better designs were those that developed designs that worked on a simple lever system that could be operated by a hand or a foot. Pushing or pulling one end of the lever caused the other end to rub against the wheel. Common errors were to fail to show pivot points or how the system could be attached to the go-cart.

The quality of drawings produced in part **(e)** was extremely variable. Only a limited number of high-quality rendered drawings were seen. A few candidates just traced the drawing given in the question and some produced 2D rather than pictorial drawings. Rendering was not attempted or was poorly done by a high number of candidates. In some cases candidates failed to include all of the design features they had produced in earlier parts of the question.

Question 8

Part **(a)** of this question was generally well answered. The majority of candidates designed partitions that would go in the box to separate the 10 glasses and prevent them from breaking. In a number of cases the wrong number of spaces were shown.

The most successful designs were frequently those that used five pieces of card that slotted together to form the ten spaces that were required for the glasses.

A number of inappropriate, over complicated, designs which frequently made use of excessive amounts of material were seen.

A limited number of excellent answers were seen to part **(b)** of the question. However, many candidates produced designs which were not fully workable. For example a very common error was to show a handle which, when used, would pull the top of the box open rather than allow the box to be picked up. A good number of the handles designed used materials other than card and, along with their fixing methods, were frequently more appropriate for using on a wooden box rather than one made from card.

The more successful designs were those that used no additional materials but rather had a handle that folded up from the top. These designs incorporated a suitable ‘locking system’ in the design of the top which prevented it from opening when the box was picked up.

Part **(c)** was generally well answered and many good symbols were seen. Most successful designs were appropriately based on variations of a broken glass. Some candidates failed to simplify the glass enough.

The better designs were those where the candidate had drawn just a silhouette of a broken glass. This outline was then coloured in using a single bold colour such as black or red.

A weakness in many answers was a failure to give sufficient details about a method that could be used to print the symbol onto large numbers of boxes. Some of the methods described, for example a stencil, were more for producing small batches rather than mass production. Responses of this type still gained some credit.

Part **(d)** of this question was answered with varying degrees of success. The majority of candidates drew the development of the box to an appropriate size/scale. However, many of the responses had errors or omissions. These included failing to draw the window, not including the handle, not drawing the required number of fold-in flaps and glue tabs or making them too small. Only a limited number of candidates included details of the internal divisions.

The quality of drawings produced in part **(e)** was extremely variable with only a limited number of high-quality, well rendered drawings being seen. In some cases the way that that candidates had chosen to draw their final design failed to show all of the features they had designed. This particularly applied to the internal partitions.

The better drawings showed the top of the box open with the handle and any fold in flaps opened out. This allowed the internal details to be clearly shown.

A good deal of inappropriate colour work was seen. A number of candidates used a different colour on each surface of the box. Few made any real attempt to use variations in tone to enhance the 3D appearance of their drawing of the box.

Question 9

This was the least popular question in this section of the paper and was answered by only a limited number of candidates.

In part **(a)** almost all candidates showed, with varying degrees of success, how the digger could be made to slot into or over the vertical support. The better designs incorporated bearings to make it easier to rotate the digger and a fixing method that would prevent the digger from being too easily removed from its support.

In general part **(b)** was not very well answered. While candidates used lots of arrows indicating various movements (some of which were not always appropriate) some failed to show how the parts could be joined.

The seats designed in part **(c)** were generally appropriate but candidates sometimes failed to show how the seat could be joined to the digger.

In part **(d)** most candidates showed a reasonable understanding of ergonomics and were able to produce a design for the handles which would make them more comfortable to use. However, sufficient details about materials and construction were not always given.

The quality of the drawings produced in part **(e)** was variable but a number of good well rendered drawings were seen. A weakness of some answers was a failure to use variations of tone to show that most of the design was made from round tubing.

DESIGN AND TECHNOLOGY

Paper 9705/02

Project 1

General comments

The Moderator would like to thank the majority of Centres for presenting work for moderation clearly labelled and with all documentation complete. Many had obviously encouraged their candidates to present design folders neatly and in such an order that the design process could be followed. It is also helpful when the photographic evidence of either the model of final product is included at the appropriate part of the design folder.

Many candidates clearly become very involved in their Design and Technology project work, identifying design problems that are close to their own needs and producing outcomes that will be of use to themselves or others.

There were many interesting topics this year including outcomes such as: fruit juice dispenser; window cleaning aid; mobile phone charging booth; safety helmet; sunshade; ear protectors; skateboard storage; poolside seat; guitar stand; robotic arm; automatic garage door; sports training aid; portable shower; projector stand; maize storage; sound recording booth and architectural models of buildings and gardens.

Comments on Individual Assessment Criteria

Project 1 - 9705/02

1. Identification of a Need or Opportunity leading to a Design Brief

This forms the introduction to any design folder, setting out the design problem and subsequent design brief. Most candidates were aware of the need to include a detailed description of both the need and the intended user(s).

2. Analysis of and Research into the Design Brief which results in a Specification

The majority of candidates do carry out some form of analysis of the topic being considered but this is not always a clear analysis of the design brief. Candidates need to consider all aspects of the use and purpose of the product that will satisfy the design need so that relevant data and information can be collected for use in the generation of design ideas. Most candidates consider existing products that might meet the need and identify some good and bad features of each.

Unfortunately after all that has been said in past reports, some Centres still allow their candidates to include vast amounts of information on materials, constructions, finishes and fittings, in this section, before any design ideas have been considered. Inclusion of this type of material cannot be awarded marks at this stage of the design process.

Specifications are generally well written and many candidates realise that generic points are of little help when using the specification to evaluate a product at a later stage.

3. Generation and Appraisal of Design Ideas

Many candidates should be congratulated on the range of ideas and high standard of communication techniques used in the presentation of design proposals. Where care is taken in this respect then it is easy to see how a candidate's thought process is developing.

It is important that different ideas are annotated with comments linked to the design specification so that all important aspects of the need are considered. The intention is that candidates should record all ideas that come to them however practical or appropriate they appear at the time. These should then be appraised in an ongoing fashion so that other ideas can develop and be drawn together to form the final design idea.

4. Modelling of Ideas

Modelling has a clear purpose in any design process and it is important that candidates give due care and attention to the quality of construction. Although materials used tend to be semi-resistant in nature there is no reason why high standards of manufacture should not be aimed for. Only when this has been achieved can high marks be awarded.

Centres are reminded of the need to include clear photographic evidence of all modelling undertaken so that the Moderator can verify the marks awarded.

DESIGN AND TECHNOLOGY

Paper 9705/03
Written 2

General comments

Centres are to be congratulated on their prompt and accurate administration of scripts. It is very pleasing for an Examiner to know that registers are correctly completed and papers are collated and presented in candidate order.

The preparation of candidates for the written paper is also impressive with centres acting upon the advice given in reports and candidate performance on the paper steadily improving. Very few rubric errors occurred and only a few candidates did not use their time effectively.

There was a noticeable increase in the overall standard in *Section B* and in particular in the development and final evaluation sections.

The general quality of sketching is very good throughout the paper. Candidates are very well prepared to describe in detail the stages of particular processes in *Section A* and effectively demonstrate their design thinking in *Section B*.

Candidates are reminded to read the questions very carefully and avoid any possibility of misinterpretation. In **Question 1**, the product was 1 mm thick sheet for vacuum forming, the process was calendering.

In *Section A*, **Part A** was again the most popular option with **Questions 2** and **3** the most popular. There was an even spread of responses in **Part C**.

Only a few candidates attempted questions in **Part B**.

In *Section B*, **Question 10** was the most popular. Very few candidates attempted **Question 11**.

It would be helpful if this report is read in conjunction with a question paper and mark scheme.

Comments on specific questions

Section A

Part A – Product Design

Question 1

There were a number of excellent responses to this question. A significant number of candidates, however, did not focus on milling as the production process for the menu holder and many did not focus on calendering as the manufacturing process for the vacuum forming sheet. This style of question is often used in this paper. The product is given in the first line, the process and material are given in the second line.

Some candidates did not attempt **part (b)**.

Question 2

This was by far the most popular question. Many answers were fully detailed and a number of candidates achieved very high marks. A range of appropriate, specific materials were stated.

There was a marked improvement in answers to **part (c)** where candidates focused on the changes required in the design, material and manufacturing process required for a large batch. Some candidates give a detailed description of a process with little reference to the product.

Question 3

A number of candidates produced comprehensive answers relating to the influence of aesthetics and marketing on 'product image'. They included issues such as attracting consumers, the use of colour and trends and fashion for aesthetics and advertising, promotion and market research in marketing strategies.

Some candidates did not give examples to support their answers.

Part B - Practical Technology

Question 4

A relatively low number of candidates attempted this question. Most candidates answered **part (a)** fully but a significant number did not describe a simple tensile test.

Question 5

Very few candidates attempted this question. All were able to explain what was meant by the term ductile and copper was the most popular material stated. Very few candidates were able to describe the drawing process required for the production of wire.

Question 6

There were very few attempts at this question. **Parts (a)** and **(b)** were very well answered. **Part (c)** was not answered well. Only a few were able to design a simple circuit to draw the curtains of a nursery room when the temperature fell below a set limit.

Part C – Graphic Products

Question 7

Some candidates were able to state the specific materials for the packaging e.g. expanded polystyrene for TV packaging. A number simply stated card for the fruit juice container, they needed to indicate that the card was coated (polyethylene or aluminium foil) to achieve a mark.

There were many excellent answers to **part (b)**, but a significant number of candidates did not focus on the impact of CAD/CAM on packaging.

Question 8

Most responses to this question were of a very high quality. Candidates had a clear understanding of how to produce an isometric and exploded view and included all required details.

Question 9

This was the least popular question in **Part C**. The best responses included quick sketches of possible containers, a full description of the manufacture of the prototype and clear details of the changes required to manufacture a large batch.

A number of candidates did not include details such methods of assembly and promotional graphics.

Section B

This Section was answered well by the vast majority of candidates. Candidates are using their time far more effectively although a number of candidates did not complete an evaluation of their proposed solution.

All candidates prepared their answers on A3 paper as instructed.

Many responses were of an exceptionally high quality, indicating that candidates had been well prepared, allocating appropriate time to each section and using all of the time available. Communication is particularly impressive.

The best responses indicated at least 5 detailed points of analysis relating to the given problem, other than the main issues given in the question.

There are a number of candidates who produce generic scattercharts for analysis which often include single words or statements e.g. 'safe', without any further qualification.

A number of candidates produce a brief, which is not necessary.

Most candidates were able to produce a list of at least 5 justified specification points.

Each question provides initial specification points or data. Candidates are expected to produce a list of five other points. No marks are awarded for repeating given data. Generic terms such as 'aesthetically pleasing' did not gain a mark.

A quick test for candidates would be to read their analysis and specification and see if they can tell what the product is.

The annotation of the exploration of ideas has improved significantly. Some candidates commented on construction details but the majority focused on the specification points.

Most candidates made reference to specific materials, a number only referred to one material. It is recommended that candidates show their understanding of the appropriate use of a wider range (at least three) of materials. The selection of ideas for further development requires improvement. Some candidates use a tick list only to select an idea. The higher marks are achieved when candidates give evaluative comments on ideas. Colour coding of evaluative annotation could be helpful.

The most significant improvement on this Section was in the candidates use notes and sketches to develop selected features, clearly showing their reasoning behind decisions. Although candidates are expected to make clear the constructional details of ideas leading to a single design proposal some focus solely on the production of a lengthy step-by-step procedure for manufacture.

Proposed solutions were generally feasible and well presented. The majority of candidates included key dimensions.

Many candidates fully evaluated their final proposal in terms of fitness for purpose, stating successful features and suggesting improvements or modifications. A number of candidates provide a table for evaluation, using tick lists against specification points. In most cases this does not give a clear appraisal of the final product.

A more detailed breakdown of the assessment criteria for *Section B* is given in the Mark Scheme.

Question 10

This was by far the most popular question in *Section B*. Many candidates used their time well and demonstrated excellent design thinking skills and very high quality presentation. A wide range of interesting and innovative ideas were proposed. Most candidates produced realistic solutions

Question 11

Very few candidates attempted this question. Ideas tended to focus on the casing of the device. Very few candidates gave details of a circuit which would inform the driver of light conditions.

Question 12

This was a popular question. Some candidates produced outstanding responses, creating a range of innovative possibilities and developing appropriate, fully detailed solutions. A number of candidates focused on one basic idea and did not look at features required such as privacy and ease of assembly and disassembly.

DESIGN AND TECHNOLOGY

Paper 9705/04

Project 2

General comments

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Comments on Individual Assessment Criteria

Project 2 – 9705/04

5. Product Development

The majority of candidates include much drawn and written information in this section of their design folders so that the reader can see detail of the intended product and how it will be assembled and finished. As required, this usually includes details of all materials, form and constructions to be used. Unfortunately there is often little evidence to indicate why these materials and methods have been chosen and if others were considered before making the final choice.

It is important that candidates also include details of all alternatives that were considered with reasons for the final selection. For the award of high marks candidates are also required to show that they have carried out some form of trialling or testing of some of these aspects. For example, successful candidates show that they have tested materials or trialled alternative constructions leading to the final decision.

6. Product Planning

The majority of candidates fulfil successfully this requirement of their design folders, giving a sensible overall plan of the intended stages of manufacture together with clear working drawings of the product and a list of all materials and components to be used.

7. Product Realisation

The made product forms the culmination and realisation of many hours of detailed design work for most candidates and it is always pleasing to see just how much care has been given to this stage of their project. It is obvious that many candidates have developed fairly advanced making skills whether this is through the use of resistant materials, graphic products, textiles or others. It is clear that most products are constructed and finished to the required standard for use and candidates should be congratulated on their successful outcomes.

The Moderator would like to remind Centres of the need to include clear and detailed photographic evidence of made products in line with the guidance set out in the syllabus document. Many candidates include photographs of the product in use and this is helpful to the Moderator. Centres are also reminded again that on no account should they send models or final made products to CIE for moderation purposes.

8. Testing and Evaluation

As was reported last year, the Moderator is pleased to see a continuing improvement in this section of design folders as more candidates carry out meaningful testing and evaluation. This can only be achieved if the product is put to the intended use and the results compared to the original design specification. It is always helpful when candidates include photographs of the product being tested in this way.

There is a temptation for candidates simply to produce a list of the specification points and then complete a tick box alongside when is felt that a particular requirement has been met. This simple approach is insufficient for the award of high marks and candidates should be encouraged to evaluate critically with reasons and evidence to support their judgements.