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FOREWORD

This booklet contains reports written by Examiners on the work of candidates in certain papers. **Its contents are primarily for the information of the subject teachers concerned**.

CDT: DESIGN AND COMMUNICATION

GCE Ordinary Level

Paper 7048/01

Paper 1 – Structured

General comments

Most candidates were able to choose one question from ***Section 1*** and two questions from ***Section 2*** that they were able to answer to some degree. It was pleasing to see that candidates had obviously been provided with appropriate drawing equipment so that they were able to respond to the best of their abilities.

Unfortunately, some candidates did not read carefully and follow the instructions in the rubric and attempted more than the required number of questions. The paper is designed for candidates to have enough time to answer the required three questions in the time available so those who attempted more were unable to give sufficient time to each question and thus their performance suffered. Centres are asked to give clear guidance to their candidates at the start of the examination so that this does not happen in future.

Once again the Examiners ask Centres to discourage their candidates from tying or stapling their two answer sheets together as this makes the marking process very difficult.

Comments on specific questions

Section 1

The choice between the two questions in this section was better balanced than last year although **Question 2** seemed to appeal to slightly more candidates.

Question 1

The majority of candidates opting for this question were able to visualise the requirements of a rack for the storage of the electric toothbrush and accessories.

(a) Most candidates were able to present at least three design sketches and, generally, the communication of ideas was quite successful. Marks were awarded for the consideration of vertical attachment and free standing together with methods of holding the items stated.

(b)(i) The Examiners were pleased that a fairly high proportion of candidates was able to communicate successfully their chosen idea through the use of one of the three prescribed pictorial projection methods. Isometric projection was the most popular but the other two were equally successful when used.

(ii) Most candidates were able to name correctly the projection method used but, unfortunately, few were able to give a specific material from which the rack would be made. In questions of this type the Examiners are looking for specific materials and generic terms such as wood, metal and plastics are not acceptable.

(iii) Candidates made reasonable use of colour on their drawing and marks were awarded for representation of the material used together with enhancement of the 3-D effect.

Question 2

Candidates were generally familiar with the requirement for garden seating and it was clearly within t experience of design thinking.

(a) This part of the question was answered quite successfully with candidates making fairly good use of colour to represent wood and concrete. Candidates need to remember that when representing wood the end grain should not be neglected.

(b) Many candidates overlooked the requirement to modify the concrete supports to add a back to the seat and simply made 'add-on' parts. Full marks could not be awarded for this type of approach. The question asked for more than one idea to be presented and for notes to be added to the design sketches. Some candidates overlooked one and sometimes both of these requirements.

(c) Many candidates drew their idea in pictorial form although the question asked for an end view of the modified seat. Dimensioning was particularly poorly done and Centres need to remind their candidates that this requirement must always be carried out to the specified standards.

Section 2

Question 3

This was, by far, the most popular question in this section and many candidates scored reasonable marks.

(a) A bar chart was probably the most successful way of presenting information of the type required although other appropriate methods were also given credit. It is important that charts of this type need some form of annotation so that information can be readily and quickly obtained.

(b) Information on the turnover by division lent itself to a pie chart although, again, other less appropriate methods were given some marks. As with part **(a)**, annotations did not always provide all the information required by an observer.

(c) Most candidates made good use of colour or shading to enhance their charts but many overlooked the requirement to add appropriate symbols.

Question 4

This was not a particularly popular question and, unfortunately, very few candidates who did make an attempt did so through the use of a pictorial view as asked. Most presented an assembled orthographic view as used on the parts drawings and, as such, lost the opportunity to be awarded nearly half the total marks for the question.

(a) Most candidates were able to assemble the parts in their correct positions although some did not appreciate that the spigot on PART F fitted into the top of assembled PARTS C and D. Similarly they did not fit the 5 mm spigot on the top of PART E into the hole in the bottom of assembled PARTS A and B. Some candidates positioned two of the three legs in such positions that the drawing gave the impression that there were four in total.

(b) Colour was used by many candidates to enhance their drawing but few added additional features as asked for in this part of the question.

Question 5

Quite a large number of candidates attempted this question but few were able to get beyond the f
As an examination technique it is always wise for candidates to read the whole of a question of thi
before attempting any part.

(a) Many candidates attempted to draw a semi-ellipse through points A, B and C although only a small number left any evidence of the construction method used. Inevitably the curves were not true semi ellipses but simply curved lines joining the three points. When a candidate uses a trammel for the construction of ellipses then this should be attached to the script or mention made of its use.

(b) A few candidates were able to project the correct height for the triangular notches but very few had the correct width or were able to go on to project the appropriate constructions from the end elevation and plan for the line of intersection.

(c) Some candidates constructed semi-ellipses for the lines showing the ends of the lid but this did not produce the correct curves and could not be awarded any marks. The correct curves could only be achieved by projection from the front view and completed end elevation.

(d) Most candidates who attempted the question were able to offer some type of addition to the lid and this was normally in the form of a handle. The question did ask for notes to be added to the sketches but this requirement was often overlooked.

Question 6

Some parts of this question were answered quite successfully but it did not prove as popular as might have been expected.

(a) Most candidates were able to draw the development of the sides and rear within tolerance but inaccuracies started to arise with the windscreen and two sections of the front bonnet. Gluing flaps were added in most cases although they did not always accommodate the curved surface on the front of the car.

(b) Candidates generally produced a five-pointed star in the given circle although construction was not always evident and as a result the shape was not regular.

(c) The seven equal divisions were normally constructed on one side and then correctly projected to the other.

(d) There were many successful ellipses although they did not always appear in a central position on the rear of the car or on the correct surface. In these cases candidates can still achieve maximum marks for the actual ellipse but only lose those for positioning.

(e) Very few candidates drew additional features on the car and very little colour was added successfully.

Paper 7048/02
Coursework

General comments

Many candidates should be congratulated on the high standard of presentation of their folders. It is clear that many gain great pleasure from presenting a total graphics package although, as has been said before, this should not be at the expense of meaningful subject content.

Comments on specific assessment headings

Problem Identification

Most candidates were able to identify a meaningful design problem linked to the chosen theme. It should be possible for the reader of a folder to be under no doubt as to the intention of the brief at the earliest stage. However, it is important that Centres use the full range of marks when assessing this section so that true discrimination between candidates can be achieved.

Research and Analysis

This section should indicate that the candidate is thinking through the possible requirements of the project outcome and identifying those issues that need to be considered at various stages as the project progresses. Information that is relevant to this should then be collected and collated in some orderly way.

Most candidates were able to do this and many looked at existing products to help develop their ideas. However, as has been mentioned in the past, there was a tendency for some candidates to reproduce pages of information, often from textbooks, that was totally irrelevant at this stage of the project folder. For example, information on materials and constructions should be considered only when a design idea has been chosen and is being developed at a later stage.

Specification for a Possible Solution

This is one of the most important steps taken in terms of moving forward in any design process. The specification should be considered as a summary of research and analysis, setting out the design requirements for the product. However, many candidates fail to be sufficiently specific in making points and they are often too vague or general in nature and could be applied to a whole range of design problems. Failure to complete this section successfully also undermines the quality of subsequent product evaluation as there are no meaningful reference points from which to work.

Proposals for a Solution

Some candidates should be congratulated on the imagination shown and the quality of communication skills used to present possible design ideas. Many ideas were genuinely innovative in nature and indicated that candidates had developed the ability to look beyond a narrow range of obvious solutions.

Unfortunately many initial ideas failed to progress beyond this point but it is hoped that candidates with such vision will develop the confidence to follow these through as they pursue this subject.

Although candidates tend to present a range of complete design ideas, it is hoped that they will develop the ability to select aspects from more than one when presenting and developing the chosen solution.

Realisation

Photographic evidence only of design solutions was seen by CIE's Moderator so it is difficult to comment in detail about made products. However, work appeared to cover the intended range of appropriate materials and many artefacts were finished to a very high standard.

Evaluation

This, alongside specification, is the other section where many candidates do not do themselves
There was evidence that candidates had carried out user tests and questionnaires, to this end,
presented. However, these often resulted in columns of ticked boxes which, in themselves, cannot be
end to the evaluation process but must lead to judgement and qualitative comment.

Far too many candidates spent much of their evaluation commenting on the design folder and they need to be reminded that evaluation is of the *product*, with reference to the specification, and not of the progress of the project generally.

Those candidates who were able to make sensible suggestions for improvement or modification did so because they had carried out meaningful testing and evaluation based on the original specification.