

DESIGN AND TECHNOLOGY

Paper 0979/12
Product Design

Key messages

Candidates should be encouraged to plan the use of their time wisely so that they complete all parts of the question that they have chosen to answer. A small number of candidates did not complete **parts (f) and (g)** of their chosen question.

Candidates should be encouraged to thoroughly read their chosen question to ensure that they avoid repeating points given in the question in their answers to **part (a)**, and produce design proposals that meet all the design requirements.

The benefits of using accurately measured drawings for **part (e)** needs to be carefully considered in terms of the time taken. Many candidates achieved high marks for this question using just freehand sketches and notes.

Candidates should be encouraged to view the paper as a holistic design exercise. A small number of candidates built their design proposals around largely pre-prepared answers for **parts (a), (f) and (g)**.

General comments

Question 1 was the most popular question. Very few candidates attempted **Question 3**.

The standard of work was good, with creativity and materials knowledge clearly demonstrated through freehand sketching with annotations.

Some candidates were unable to express their thoughts clearly in the written parts of the paper and may have benefitted from adopting a more structured approach. For example, in **part (d)** candidates may have found it beneficial to use a series of bullet points rather than continuous text.

Comments on specific questions

Question 1

- (a) Most candidates managed to list four additional points about the function of the storage unit that they considered to be important. Commonly seen answers related to the construction, materials, use or location of the storage unit. Candidates should be advised against repeating points that are given in the question or giving generic points that might apply to almost any product.
- (b) Most candidate used sketches and notes to good effect to show two methods of protecting products from the weather. Many candidates showed roof structures, or enclosures with doors, but some candidates interpreted the question as requiring a method of protecting a material, such as varnish.
- (c) Freehand sketches with annotations and colour were the most frequently seen methods used to show design ideas. A wide range of appropriate design ideas were seen, but in some cases the solutions did not fully meet the requirements of the question with features such as the method of removing excess amounts of mud missing. It is important that all design ideas fully meet the design requirements if candidates are to access the full range of marks. A small number of candidates produced fewer than three design ideas.

- (d) The evaluations of ideas were generally impressive, with candidates able to clearly demonstrate an understanding of the positive and negative features of their design proposals. Commonly seen answers focused on the materials being particularly suitable for the environment or the ease of accessing the boots. It is important that candidates justify their evaluations rather than making broad statements if they are to access the full range of marks.
- (e) A variety of methods were used to show the full solution to the design problem. These included orthographic drawings, exploded views, isometric views and materials lists. The strongest responses included drawings with sufficient information for a skilled person to make the product. Candidates should be advised against redrawing the design idea presented in **part (c)** and should focus on the construction details, including materials, methods of joining the materials and finishes. Weaker responses often did not include construction details or important dimensions.
- (f) Most candidates were able to name two specific materials that would be used to make their design proposal and gave reasons for their choices. Aluminium, acrylic and teak were commonly seen materials with reasons usually referring to the working properties or aesthetic qualities of the material. Candidates should be advised against giving generic names of materials such as wood, or generic reasons such as being easy to work with, as these are not awarded marks.
- (g) Most candidates were able to identify and outline a method used to manufacture one part of their design. It is important that candidates include the correct names of tools and equipment to be used in the method of manufacture if they are to access the full range of marks. Generic terms such as a saw are not awarded marks. The most successful responses used a combination of sketches and notes to outline a method of manufacture.

Question 2

- (a) Most candidates managed to list four additional points about the function of the advertising stand that they considered to be important. Commonly seen answers related to the construction, use or location of the advertising stand. Many candidates also considered the fragile nature of eggs in their responses. Candidates should be advised against repeating points that are given in the question or giving generic points that might apply to almost any product.
- (b) Most candidates used sketches and notes effectively to show two methods of introducing movement to the advertising stand. Many candidates used electric motors or wind power to add movement to a feature of the advertising stand, but some candidates added wheels so that the advertising stand could be moved. Both interpretations of the question were considered appropriate methods of introducing movement to the advertising stand.
- (c) An impressive range of sketches with annotations were seen for this question. Commonly seen responses included using the outline shape of a chicken for the advertising stand and light emitting diodes to attract attention. It was sometimes unclear how some of these imaginative design ideas would work or if they were suitable for an outdoor environment. It is important that all ideas fully meet the design requirements if candidates are to access the full range of marks. A small number of candidates produced fewer than three ideas.
- (d) The evaluations of the ideas were generally very impressive with candidates able to clearly demonstrate an understanding of the positive and negative features of their design proposals. Candidates often focused on the weather conditions, stating such things as that the stand would blow away in the wind or the materials would not be waterproof. It is important that candidates justify their evaluations rather than making broad statements if they are to access the full range of marks.
- (e) A variety of methods were used to show the full solution to the design problem. These included orthographic drawings, exploded views, isometric views and materials lists. Colour was frequently used to give clarity to drawings. Construction details were often shown quite clearly through the drawing of a development (net) and labels identifying the materials and joining methods. This question specifically asked for construction details and important dimensions but, particularly in weaker responses, these were often not included in the drawings.
- (f) Most candidates were able to name two specific materials that would be used to make their design proposal and gave reasons for their choices. Commonly seen materials were foam board and MDF, with the reasons relating to the weight or structural stability of the material. Candidates



should be advised against giving generic names of materials such as wood, or generic reasons such as being easy to work with, as these are not awarded marks.

- (g) Most candidates were able to identify and outline a method used to manufacture one part of their design proposal. Cutting out of sheet materials and vacuum forming were commonly seen responses to this question. It is important that candidates include the correct names of tools and equipment to be used in the method of manufacture if they are to access the full range of marks. The most successful responses used a combination of sketches and notes to outline a method of manufacture.

Question 3

- (a) Most candidates managed to list four additional points about the function of the system to release the chickens automatically that they considered to be important. Commonly seen answers related to the construction or use of the system but some candidates focused on the safety of the chickens. Candidates should be advised against repeating points that are given in the question, such as that the system must automatically release the chickens each morning, or giving generic points that might apply to almost any product.
- (b) Most candidates used sketches and notes to good effect to show two methods of opening and closing the entrance. Many candidates showed a door that opened on hinges or a hatch that slid up and down. A small number of candidates produced two methods that were very similar or lacked sufficient detail to show how the entrance would open and close.
- (c) An impressive range of imaginative sketches with annotations were seen for this question, but some candidates focused on the entire hen house rather than the system that would automatically release the chickens each morning. It was sometimes unclear how the design ideas would work, with pulleys and motors commonly seen but with little real understanding demonstrated of how they would be combined to create a system to release the chickens. It is important that all design proposals fully meet the design requirements if candidates are to access the full range of marks. A small number of candidates produced fewer than three ideas.
- (d) The evaluations of the ideas were generally impressive with candidates able to clearly demonstrate an understanding of the positive and negative features of their design proposals. Points that focused on the safety of the chickens, especially avoiding them getting trapped, were commonly seen. It is important that candidates justify their evaluations rather than making broad statements, such as that the design would not work well, if they are to access the full range of marks.
- (e) A variety of methods were used to show the full solution to the design problem. These included orthographic drawings, exploded views, isometric views and materials lists. Colour was frequently used to add clarity to the drawings. Most candidates used drawings to show the construction of the individual parts of their design proposal but sometimes omitted to clearly show how these joined together to make a product. This question specifically asked for construction details and important dimensions but, particularly in weaker responses, these were often missing.
- (f) Most candidates were able to name two specific materials that would be used to make their design proposal and gave reasons for their choices. Commonly seen materials were MDF, acrylic and steel with reasons for selection relating to the physical properties of the materials. Candidates should be advised against giving generic names of materials such as wood, or generic reasons such as being easy to work with, as these are not awarded marks.
- (g) Most candidates were able to identify and outline a method used to manufacture one part of their design. Commonly seen answers included the use of a laser cutter or 3D printer. It is important that candidates include the correct names of tools and equipment to be used in the method of manufacture if they are to access the full range of marks. The most successful candidates used a combination of sketches and notes to outline a method of manufacture.



DESIGN AND TECHNOLOGY

Paper 0979/02
School Based Assessment

Key messages

- Most coursework portfolios were well presented but some were not easy to follow. A more structured approach following the assessment criteria is recommended for all candidates.
- To achieve high marks for Assessment Criterion 1, candidates need to look at the needs and expectations of the selected user group in more detail before producing a clear design brief.
- Centres are reminded that practical outcomes and three-dimensional prototype models should not be forwarded with the sample for moderation.

General comments

Centres continue to prepare candidates exceptionally well for the project.

The majority of centres applied marks consistently and accurately. Assessment Criterion 3: Generation and exploration of ideas and Assessment Criterion 4: Development of the proposed solution, tended to be marked slightly generously by a number of centres.

For new centres, or teachers new to the specification, guidance for assessing coursework and other very useful support for the syllabus can be found on the Cambridge International website.

Comments on specific sections

1. Identification of a need or opportunity with a brief analysis leading to a design brief

This section was generally assessed accurately but a significant number of candidates made limited or no reference to the needs and expectations of the selected user.

2. Research into the design brief resulting in a specification

The research into the design brief should lead to information and key points to take forward to the design stage. As well as researching the features of existing products, candidates should be encouraged to gather other relevant information and data such as ergonomic or environmental factors, the size and shape of items to be used in or with the product being developed.

Some specifications were full and detailed. Many were very brief and generic giving a limited indication of key aspects required. Specification points needed to be focused on the brief and justified to direct the design stages and to provide check points for evaluation.

3. Generation and exploration of design ideas

There were some examples of very high quality presentations of creative design possibilities. However, a number of centres were generous in their assessment of this section.

To gain a high mark in Assessment Criterion 3, a wide range of ideas should be considered that will answer the design problem. These ideas should be annotated and presented using a range of drawing techniques. The ideas should be analysed against the specification and a final idea selected which can be developed in the following section. This section requires candidates to present their own ideas and not insert images of existing products or the item that they have made. Such evidence should feature in the appropriate assessment criteria strand.

4. Development of proposed solution

This section was generally well covered but some centres were too generous in their assessment. There was clear evidence of many candidates carrying out three-dimensional modelling to help visualize the size, shape and proportions of the design proposal.

With first-hand experience of trialling and experimentation, candidates should be able to make informed decisions about materials, construction possibilities and finishes for the product they wish to make. All decisions need to be communicated in the folder either through notes and/or photographic evidence. This section should conclude with a clear drawing or CAD model of the product that is going to be constructed.

5. Planning for production

This section was assessed accurately by most centres. Most candidates produced a dimensioned working drawing with many including a cutting list and health and safety considerations.

Some candidates did not produce a detailed, logical sequence of the stages of manufacture.

6. Product realisation

Where possible, candidates fully completed the manufacture of a practical outcome and there were many good quality manufactured products presented.

Most candidates used clear photographic evidence during the key stages of manufacture of the product to emphasize particular features and the quality of making.

7. Testing and evaluation

Where possible, candidates carried out a test of their product and produced a brief evaluation. Some candidates produced an outline of evaluation against the original specification but many specifications did not have sufficient detail for this to be helpful. Tick lists with no explanation were not appropriate.

After testing, candidates should identify the strengths and weaknesses of the product, and use sketches and notes to suggest proposals for further improvement or further development.



DESIGN AND TECHNOLOGY

Paper 0979/32
Resistant Materials

Key messages

- Candidates should be reminded to read the questions carefully and not attempt to answer before they are absolutely clear about what they have been asked to do. Too often, candidates provided answers that did not relate in any way to the questions asked. Candidates should try to focus on the key elements of each question. The mark allocation given to each question and the space provided to answer the question provides candidates with a clear indication of what is required.
- Candidates need to improve their knowledge and understanding of the practical processes required to work the resistant materials: wood, metal and plastic. Many candidates named tools or described processes that were totally unsuitable for specific materials.
- Candidates should be advised to focus on their communication skills. They must try to provide clearly drawn sketches when attempting questions that begin with the statement: '*Use sketches and notes to...*'. In addition, notes should enhance and make clearer what they have drawn and not simply state the obvious.

General comments

Section A

Many candidates lacked the all-round knowledge and understanding required to answer all questions in this section.

Section B

This section always has a number of questions with large mark allocations requiring a combination of clear and accurate sketches supported by detailed written notes. Many candidates did not understand how to work the materials.

Comments on specific questions

Section A

Question 1

Most candidates were able to state the possible damage that could occur when clamping two pieces of softwood with a G cramp. The most common correct answers referred to the cramp crushing, marking or denting the surfaces and that this could be prevented by placing scrap wood blocks between the cramp and the softwood blocks.

Question 2

Only stronger candidates answered the question correctly by stating the generic use for each of the tools rather than stating how each of them could be used when making the hardwood stand shown in the figure. Generally, few candidates could state the purpose of the sliding bevel, often referring to it as a measuring tool rather than a marking out tool.

Question 3

Many candidates correctly identified 'hard' as the term to describe steel that contains a high amount of carbon. However, a sizeable number of candidates gave an incorrect answer to this question.

Question 4

Most candidates attempted some form of tee-halving joint but the accuracy and clarity of sketches was extremely varied. Many candidates did not know what a tee-halving joint was and some candidates did not provide an exploded view that was required by the question.

Question 5

Only the strongest candidates gave reasons for the webbing that occurred in the vacuum formed plastic sheets. For sheet **A** the mould was too deep or high. For sheet **B** the moulds were too close together.

Question 6

There were many incorrect answers to this question. Candidates did not appear to understand the difference between the terms 'temporarily' and 'permanently' when considering types of fastening that could be used to join the two pieces of 5 mm thick mild steel strip. Stronger candidates provided correct answers.

Question 7

- (a) Most candidates could not name the correct types of drill bit required to drill different size diameters of hole. Only a very small minority of candidates were able to name suitable types of drill bit for all three holes.
- (b) Few candidates could state a danger that could occur when drilling thin plywood. Very few stated that the plywood could splinter as the drill cut through the material or that the drill could snag, causing the plywood to spin.

Question 8

Very few candidates were able to state the manufacturing processes for both the model car and the guttering, die casting and extrusion respectively. However, some candidates were able to identify one of the manufacturing methods correctly.

Question 9

Only stronger candidates provided accurate drawings of both a rebate and a groove.

Question 10

- (a) Most candidates recognised the process as 'anodising', 'electroplating' or 'electrolysis'.
- (b) The vast majority of candidates gave 'to resist corrosion' correctly as a reason for applying a finish to a product made from metal.

Section B

Question 11

- (a) Many candidates provided two reasons why oak was suitable for the table. There were many misconceptions about oak, including that it was easy to work. Many candidates stated that oak was weather resistant and while this is true, it was totally irrelevant to the table that candidates needed to focus on in the question.
- (b)(i) Only a minority of candidates understood that the reasons for constructing the table top from three boards rather than one board was because 500 mm boards are not available or that they would be too expensive. Some candidates correctly stated that three boards would be more stable and less likely to warp than a single board 500 mm wide.

- (ii) Only stronger candidates explained correctly why the three boards had been arranged as shown in the figure.
- (c) Candidates demonstrated little or no understanding of the ways in which movement in products made from solid wood has to be taken into account.
- (d)(i) The majority of candidates understood that the grooves in the dowel would allow the glue to make a stronger joint, provide more grip or allow air or glue to escape from the hole.
 - (ii) The majority of candidates understood that the chamfer allowed the dowel to enter the hole more easily.
- (e)(i) Many candidates named two tools that could be used to mark out the development (net) made from 1 mm thick mild steel sheet. The most common correctly named tools included a scribe, steel rule, (often referred to as a 'ruler') and a try square. However, there were many 'marking knives', 'pencils' and 'marker pens' that were not appropriate when marking out mild steel.
 - (ii) Most candidates understood the purpose of a centre punch was that it would prevent a drill from slipping or that it provided a small dent into which the drill would be guided.
 - (iii) Only stronger candidates were able to provide accurate technical details showing how the development (net) could be cut out. Many candidates named tools that would be used to cut wood as being appropriate with metal. For example, tenon and coping saws were common incorrect answers.
 - (iv) Details relating to the bending of the mild steel sheet to make the jig were generally inaccurate, highlighting gaps in candidates' understanding of working with sheet metal.
- (f) Most candidates could not provide any relevant stages to describe how a laser cutter could be used to cut out the shape of the magazine rack. CAD/CAM is an increasingly important aspect of D&T work and it is essential that candidates are given the opportunity to become conversant with CNC machines including the laser cutter.
- (g) Many candidates gained only one mark for showing how the $\varnothing 12$ curves could be produced in the acrylic sheet. To access three marks candidates needed to show some type of former, (usually a dowel or metal rod) and a method of heating and softening the acrylic. Most candidates did not show all the details required to achieve three marks.

Question 12

- (a) The majority of candidates provided two benefits of using acrylic for the bathroom storage unit. The most common correct answers included the ability to be shaped easily, the attractive appearance and the range of colours available.
- (b) Many candidates stated at least one important piece of information obtained by modelling the storage unit. The most common correct answers included to check the size/dimensions, the overall appearance and the facility to check for errors and make possible modifications.
- (c) Generally, the performance of candidates answering this question was not strong. The comments made for **Question 11(f)** apply to the performance of candidates answering this question. Candidates were required to describe how CAD and CAM could be used to produce the slots in the acrylic shelves. This gave candidates an opportunity to describe how they could produce the design using CAD then transfer the data of the CAD drawing to an appropriate CNC machine, set it up and cut out the slots.
- (d) Very few candidates provided any benefits of using a scroll saw to cut out the slots. Most answers simply stated that it was accurate. Scroll saws are not easy to use but they can be controlled while keeping the acrylic flat on the saw table. The most common benefit was that a scroll saw had a thin blade which allowed it to cut intricate shapes.
- (e)(i) Many candidates named two hand tools that could be used to produce the shelf. Candidates had a wide range of tools from which they could choose. The most common correctly named tools were specifically named saws and files.

- (ii) Only stronger candidates were able to clearly explain why the acrylic sheet would be heated in an oven rather than using a line bender or strip heater. There were some good answers that stated that the line bender or strip heater only heated a narrow line while the oven heated the entire piece.
- (iii) The best method of holding the acrylic edging against the front edge of the shelf involved the use of male and female formers. Few candidates gave this response. Some candidates were awarded partial credit for attempting to clamp the edging in two directions, a method that had some potential.
- (iv) Most candidates gave a safety precaution that must be taken when using acrylic cement. The most common precautions were the wearing of a mask or gloves and a well-ventilated area in which to work.
- (f) Few candidates provided clear sketches and legibly written notes explaining how their design solution would work. When answering design-type questions that carry a large mark allocation, (6 marks), it is essential that candidates read the question carefully so that they are clear about the main points they have to address. Often, the last sentence in this type of question states: *'Give details of materials and constructions used'*. Where a question has this statement, there will be specific marks awarded for providing this information. Very often candidates did not address the instructions in this statement.

There were some innovative ideas involving the use of bearings and pivots that could have been potentially successful but often candidates were unable to present their ideas clearly enough to be credited. Candidates were rewarded for showing some form of additional base with some method of rotation which was supported with practical details naming the materials used and their construction.

Question 13

- (a) The vast majority of candidates named a suitable hardwood for the adjustable lamp.
- (b) Most candidates provided two items of information that could be obtained by designing a computer-generated model of the adjustable lamp.
- (c) (i) This question proved challenging for many candidates. There were many confusing answers relating to saws and other inappropriately named tools.
 - (ii) Most candidates provided a sketch showing the hardwood held securely in a vice. There were some excellent sketches that showed the hardwood angled slightly so that the waste could be planed off horizontally.
- (d) (i) Many candidates described the use of glasspaper, (often referred to as 'sandpaper') and wiping off the dust as valid stages when preparing the hardwood to take a finish. Marks were also awarded to those answers that related to the use of different grades of glasspaper.
 - (ii) Most candidates named varnish, French or white polish, teak oil and wax as an appropriate clear finish.
 - (iii) Many candidates achieved only one mark for this question by stating that a clear finish allowed the natural colour and grain markings of the hardwood to be seen.
- (e) Many candidates achieved at least one or two marks for showing the threaded rod through the body and tail and tightened by some type of nut. The strongest answers included a hand-tightening method required in the question. Often, the poor quality of sketches and illegible notes made it difficult to interpret the candidates' design solutions.
- (f) (i) Most candidates gained at least one mark for this question. Veneered plywood was not considered to be easier to work.
 - (ii) Only stronger candidates showed completely practical methods of construction of the lampshade. The question highlighted the word 'only' when referring to the 4 mm thickness of the veneered plywood. This should have alerted the candidates to the fact that the plywood was too thin to be

nailed or screwed together and that an alternative method was required. The strongest answers involved the use of additional strips glued to the sides which provided some thickness for nails or screws to be added.

- (g) A minority of candidates provided a practical modification to the lampshade so that the neck could be adjusted. Most candidates did not take into account the fact that a bulb holder and light bulb would be fitted inside the lampshade. Therefore, the majority of solutions showed a slot in the lampshade so that the neck could be inserted. What was required was some form of bracket that could be attached to the underside of the lampshade to which the neck could be joined.

DESIGN AND TECHNOLOGY

Paper 0979/52
Graphic Products

Key messages

The focus of this assessment is Graphic Products. Future candidates would benefit from practical activities based on the questions contained in this paper with a focus on drawing accurately using instruments.

General comments

Candidates were required to complete all questions in **Section A (A1, A2 and A3)** and then go on to answer either **Question B4** or **B5** from **Section B**. An equal number of candidates chose to answer **Question B4** and **B5**. A small number of candidates did not follow the rubric instruction and answered all questions.

There are areas of the syllabus where some candidates did not generally perform well. With the increased use of computers in graphic design and graphic products, candidates need to be aware of CAD/CAM equipment, how it is used and the advantages of it. The drawing of 3D shapes in planometric view and constructing ellipses are areas where many candidates did not perform well.

Comments on specific questions

Section A

Question A1

- (a) Candidates were required to draw the screen outline on the front view of the mobile phone. Candidates could have improved on their responses as the given sizes were not always drawn correctly or accurately onto the front view.
- (b) Candidates were required to draw the on/off button onto the front view of the mobile phone. The given sizes were not always drawn correctly or accurately onto the front view.
- (c) Candidates were required to project the side view of the mobile phone from the given plan and front views. Many candidates projected from the front view and drew the view to the dimensions given. Candidates who projected from the plan and front views achieved a better result.

Question A2

- (a) Candidates were required to draw the isosceles triangle to complete the email icon. Most candidates achieved full marks.
- (b) Candidates were required to draw the radius lines and end angles. The radius sizes were not always drawn correctly or accurately. Some candidates drew the angles at 30° instead of 45°.
- (c) Candidates were required to draw the circle and regular hexagon to the sizes given. Many candidates drew irregular hexagons with different side lengths and angles.
- (d) Candidates were required to construct the ellipse. Many candidates did not achieve full marks on this question. Some candidates used incorrect construction methods or joined the plotted points of the ellipse with straight lines rather than a smooth elliptical shape. Where a trammel is used for constructing an ellipse, this must be attached or drawn adjacent to enable marks for construction to be awarded.

Question A3

In this question, candidates were asked to explain why icons are used instead of written instructions on mobile phones.

A full explanation was required for full marks. Candidates who explained that icons can be universally understood by people all around the world because no written words or language are used achieved full marks. Some candidates also explained that the icons take up less space than written words. Some candidates did not achieve full marks on this question as although they stated that icons were easier to understand, they did not give a detailed explanation.

Section B

Question B4

- (a) Candidates were required to complete the drawing of the development (net) to a scale of 1:2. Candidates needed to add the back and front sections including the cut-out. All fold lines needed to be added to the correct convention. Many candidates drew the back and front sections to the correct length but with incorrect sloping sides.
- (b) Candidates were asked to show a method of preventing the tongue from coming out of the slot in the development (net). There was a wide range of responses. Candidates who clearly sketched a method that would work effectively achieved full marks.
- (c) (i) This part of the question asked candidates to apply thick and thin line technique to the mobile phone holder. The principle is that where only one edge is seen producing the corner, a thick line is applied. All edges where two sides are seen producing the corner are left as thin lines. Many candidates showed some knowledge of the techniques and gained marks but could improve on the use of this technique.
- (ii) Candidates were required to render the mobile phone holder to look like Styrofoam. Shading that showed a texture representative of Styrofoam achieved full marks.
- (d) (i) Candidates were asked to complete the exploded isometric view by adding the missing side piece of the mobile phone holder. Candidates who projected lines from the corners of the right-hand side at 30° achieved the best marks.
- (ii) Candidates were required to name a suitable adhesive for joining the Styrofoam blocks together. Candidates who named a specific type of glue or tape achieved the mark. Candidates who named solvent-based glues did not achieve a mark as these are unsuitable for Styrofoam.

Question B5

- (a) Candidates were required to complete the planometric view of the point of sale display to a scale of 1:2. Some candidates did not attempt this part of the question. Many candidates achieved some of the marks available but did not draw parts of the point of sale display to the sizes given or accurately enough to achieve full marks. Candidates who correctly read the orthographic views and worked from the given corner achieved the best results.
- (b) (i) This part of the question required candidates to name three suitable tools or items of equipment they would use when cutting the foamboard to shape. Suitable tools or items of equipment included named types of craft knife, cutting mats and metal or safety rulers.
- (ii) The lettering on the mobile phone display stand was produced using a computer. Candidates were asked to describe a method of transferring the lettering for the point of sale display from the computer to the point of sale display. Many candidate responses described printing methods used on paper or printing directly onto the foamboard which were unsuitable due to the rigid nature of the material.

- (c) This part of the question asked candidates to complete an estimated two-point perspective view of a package based on the given details. Candidates were required to show knowledge of two-point perspective drawing. Candidates who projected lines to the respective vanishing points and maintained appropriate proportions for the parts of the package achieved the best results.

