

Examiners' Report

June 2013

GCE Design and Technology

Product Design 6GR02 01

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Introduction

It is clear that the majority of candidates prepare very well for their examination and are able to demonstrate their knowledge and understanding well through their responses. The more able candidates tend to be those who read the question and respond with specifics, who gain more marks than those who write around the subject with generic responses. One aspect that continues to be disappointing is that there are still some candidates who believe that it is acceptable to respond to all questions with generic, generalised answers; such as 'strong, fast, quick, cheap etc...' These are low knowledge level responses and show only a basic understanding of some aspects of the subject; therefore gain low marks.

Candidates need to know the information and subject which they are being questioned about and organise this information effectively to answer the question set, rather than write as much as possible in an attempt to ensure their response will gain some marks somewhere in the script. Related to this, whilst it is clear that most candidates use the time in the exam well, some candidates still find the need to use additional pages to complete answers. The spaces provided in the examination paper are larger than we would expect any answer to take. Most candidates use this space wisely; however, given that additional pages continue to be used, centres should assist candidates during their exam preparation to write concisely.

Question 1a

This question is aimed at testing the candidate's understanding of the application of materials; specifically materials which can be used to produce vacuum formed blister packs. It is not specified at this point whether the blister pack is to be transparent or not, therefore any appropriate vacuum forming material is acceptable.

This is a knowledge based 'give' question, so a single word or single phrase would be acceptable, as would polymers in their abbreviated forms such as HIPS.

It is useful to refer to the published mark scheme when looking at the examples, to clearly see where marks are given.

(a) State **one** suitable polymer for the vacuum formed blister.

(1)

High Impact polystyrene because it can be ^{rigid or expanded} transparent and moulded easily, it can be stretched.



ResultsPlus Examiner Comments

This response is a high level answer, which goes beyond the requirements of the question. This was awarded the full marks available, as the candidate has stated that high impact polystyrene sheet is an appropriate material.



ResultsPlus Examiner Tip

The candidate has given a justification for the material which is not required. For 'state' type questions a single word answer is allowable and candidates should not spend time producing a justification when it is not needed.

(a) State **one** suitable polymer for the vacuum formed blister.

(1)

HIPS / High Impact Polystyrene.



ResultsPlus Examiner Comments

In this instance, the candidate has gained full marks for stating an appropriate material. The candidate correctly identified a suitable vacuum forming material.



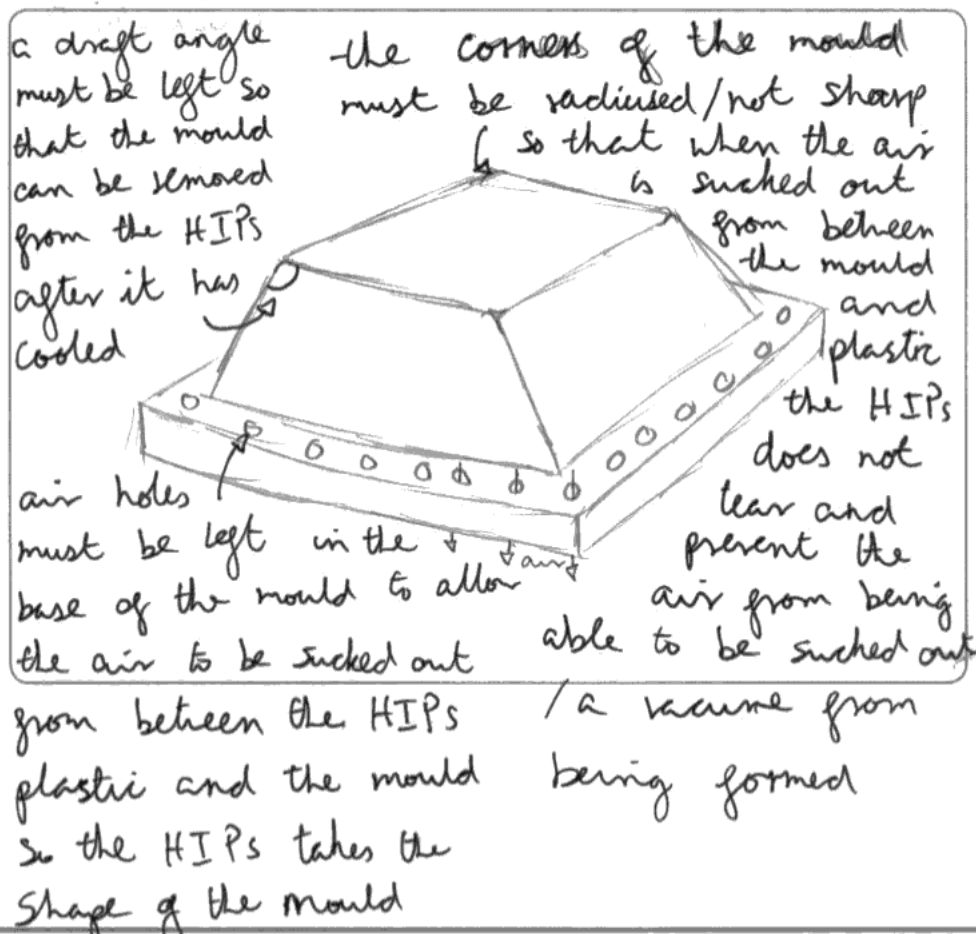
In this instance, the candidate has provided only the required information which is evidence of good examination technique.

Question 1b

This question allows the opportunity for candidates to describe the features of a vacuum forming mould using annotated sketches.

It provides the opportunity for candidates to show they have a sound understanding of vacuum forming process and the features which need to be present in a former in order to produce accurate pieces of work.

In this case it is a 'describe' question, so requires features to be identified and also for these to be explained. The question did not ask candidates to describe the vacuum forming process, although in many cases candidates who did this were able to gain some credit by including a sketch of the former.





ResultsPlus

Examiner Comments

This is an example of a response which gained full marks. The sketch clearly shows the draft angles and the air holes in the base. Not as clear are the rounded corners, although these are indicated in the annotation.

The annotation is detailed and gives the reasons for having the air holes, the rounded corners and the draft angle. The question only asks for two features, therefore any two of those identified would gain the marks.



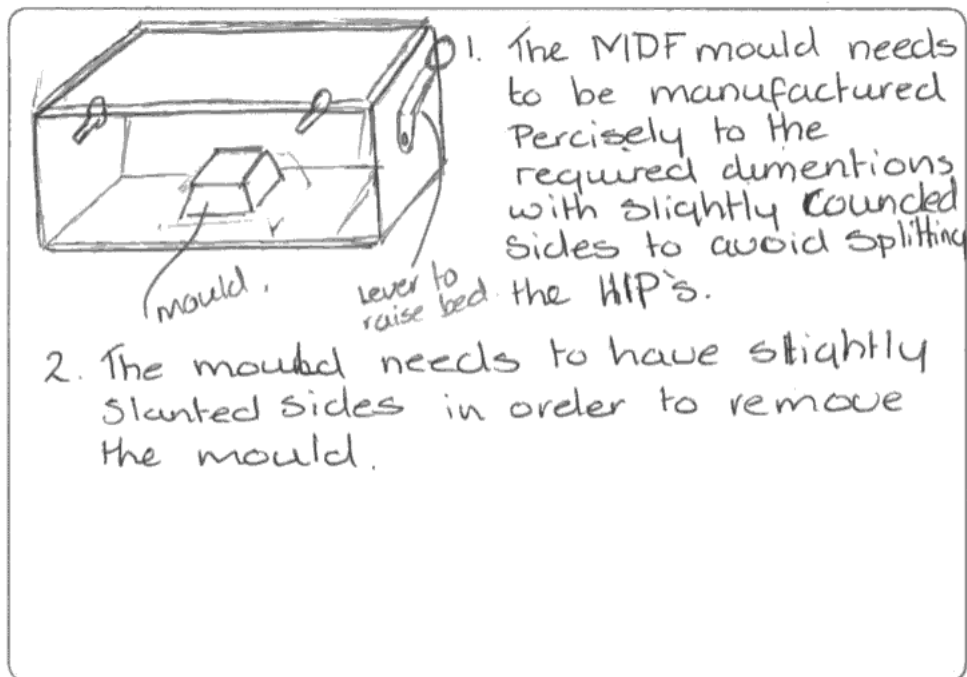
ResultsPlus

Examiner Tip

This candidate has provided detailed annotations which describe the features and also explain why they are present. The sketch is clear and drawn neatly therefore making the identification of features easier.

The candidate has gained three marks for this response as the sketch clearly shows draft angles/sloping sides on the mould and the reason for these are given in the final part of the annotation.

The candidate gained a third mark by stating the sides need to be slightly rounded to avoid splitting the HIPS.





ResultsPlus

Examiner Comments

A response which does not fully answer the question. The candidate has shown the vacuum forming machine rather than just the former. If the former had been drawn alone and in more detail, the candidate could have gained at least one further mark.

Question 1c

Often, questions at AS level involve 'completing the table'. These often require short phrase responses and for these responses to be linked together in some way. In this case the link is between a risk and an appropriate control measure.

This is a knowledge based 'state' question, so a single word or single phrase would be acceptable.

Hazard	Risk	People at risk	Control measure
Using a disc sander	1. MDF fibres going into eyes.	User or people in immediate area	1. Wear fitted goggles.
	2. Hair being caught in the machine.		2. Tie long hair back to prevent this.



ResultsPlus

Examiner Comments

This candidate has gained full marks by identifying two different risks, in this case one related to dust particles and another related to entanglement. The control measures are appropriate for the stated risks and show the expected level of understanding.



ResultsPlus

Examiner Tip

The candidate has correctly linked the risk to the control measure in both instances and has presented their thoughts clearly. It is always good practice to ensure answers are concise when asked to complete tables.

Hazard	Risk	People at risk	Control measure
Using a disc sander	1. Dust could go in someone's eyes	User or people in immediate area	1. wear protection goggles to cover eyes
	2. could burn/ sand fingers instead of the work		2. wear protective gloves made from a heavy duty material.



ResultsPlus

Examiner Comments

The candidate has gained 2 marks for c(i) as they have correctly identified two different risks. However, for c(ii) they have stated two different types of PPE, which would be a repeated point, although gloves are not suitable for use with a disc sander.



ResultsPlus

Examiner Tip

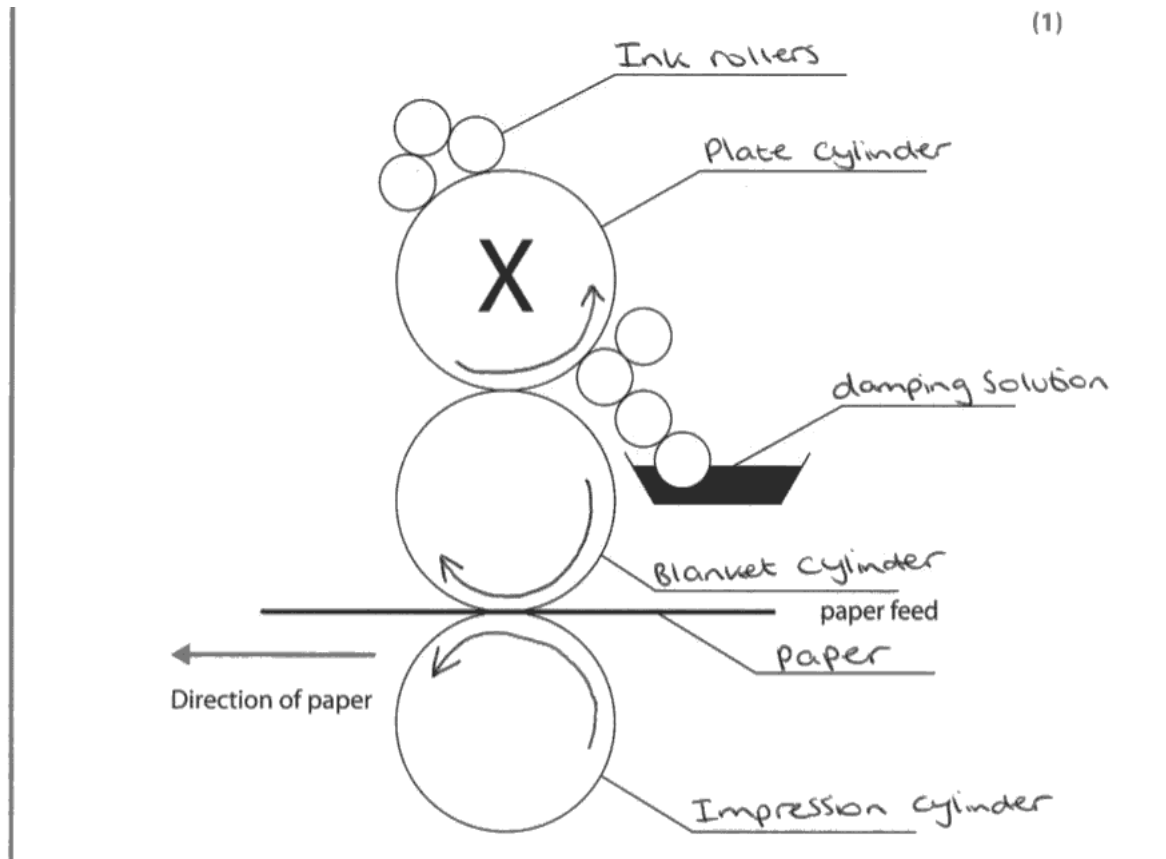
When asked to complete a table, it is important to make sure that each response is unique. In this response the candidate names two types of PPE, a response like this will restrict achievement as marks cannot be awarded for the same point twice.

Question 2a

The specification lists numerous materials and processes, some of which may not be commonly used in schools. This question requires the candidates to have knowledge of one of these processes, i.e. the offset lithography process.

In this question, candidates were asked to label the different parts of the equipment and to identify the direction in which the plate cylinder would rotate.

It is useful to refer to the published mark scheme when looking at the examples to clearly see where marks are given.



ResultsPlus

Examiner Comments

This candidate has achieved full marks by identifying the ink rollers, plate cylinder, damping solution, blanket cylinder and impression cylinder along with the anticlockwise rotation of the plate cylinder.

In part (i) of the question there were 6 features which could be identified, therefore any 5 correct would achieve full marks.



ResultsPlus

Examiner Tip

The candidate has provided clear labels and has shown the rotation of each cylinder which has allowed them to identify the correct direction for cylinder X - the plate cylinder.

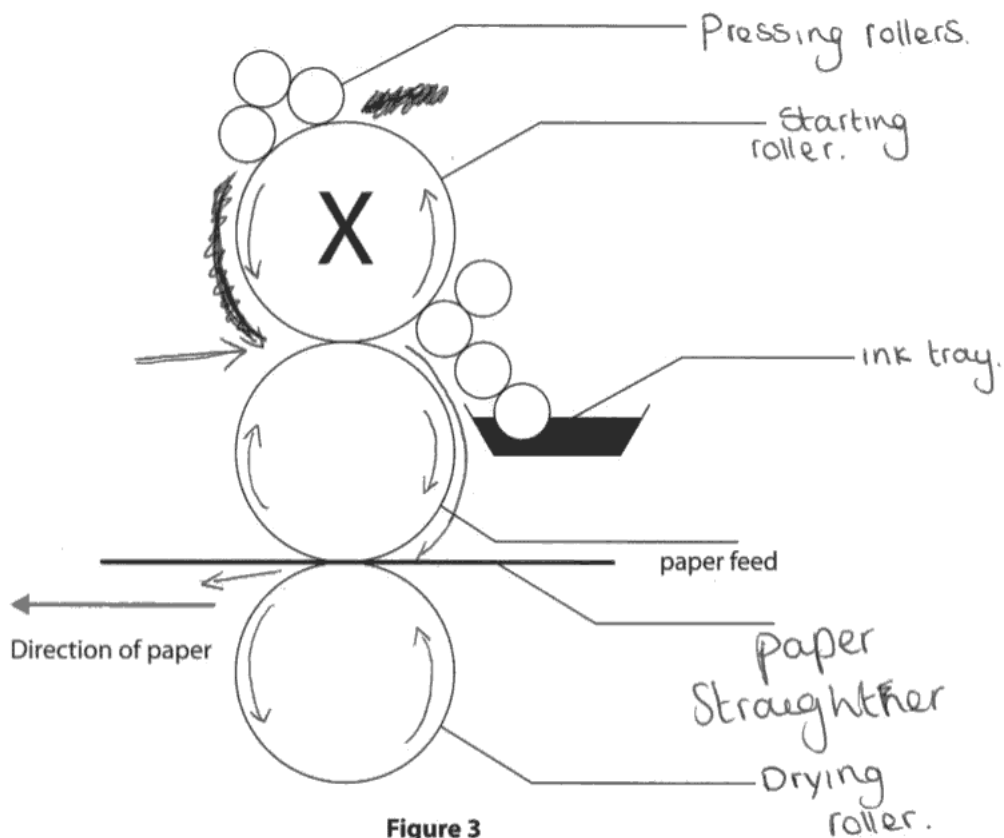


Figure 3



ResultsPlus

Examiner Comments

This response shows a number of typical errors made by candidates. It was common for candidate to wrongly identify the damping solution as an ink tray or similar and for cylinders/rollers to be given names from other processes.



ResultsPlus

Examiner Tip

The candidate has provided answers for most of the parts of the printing process. This is good technique even if the responses are wrong.

Question 2b

This is a knowledge based 'describe' question, so a response which includes four descriptive points from the mark scheme would achieve full marks. These statements could be as bullet points or written as a paragraph.

This question focuses on the process of printing images using the offset lithography process, rather than how plates are produced or the advantages/disadvantages of the process.

It is useful to refer to the published mark scheme when looking at the examples to clearly see where marks are given.

Based on the fact that oil and water do not mix the cylinders role over the paper and only the area which are water repellent allow the ink to be applied and the oil resistant repels the ink. The ink is taken from the ~~the~~ ^{which} smaller rollers ^{and} apply the ink to the larger plate rollers ~~that~~ ~~are~~ then pressed onto the the paper as it is fed through the between the plate and impression cylinders. After being dampened.

(Total for Question 2 = 10 marks)



ResultsPlus Examiner Comments

This candidate has achieved 3 marks by noting a range of features related to the offset lithography process.

They have correctly identified that the process is based on the fact that oil and water do not mix. They have identified that ink is transferred to the plate cylinder and that the plates are dampened.

There are some errors in the response, however the candidate has shown a basic understanding of the process.



ResultsPlus Examiner Tip

This candidate has provided a full answer to the question and even though they have made some mistakes, they were able to gain a relatively high mark. It is good practice to answer in as much detail as possible.

Question 3a

This is a knowledge based 'describe' question which requires candidates to select three stages of the Fourdrinier process and to describe each of these selected stages.

As a result of being asked to state their chosen stages, candidates are only awarded marks where their responses are given under the correct heading. This was a common error amongst candidates who wrote extensively under one section about the entire process.

It is good technique for candidates to fully read the question, and if they are asked to name and describe stages of a process, then the response should relate to their named stages.

Chosen section Wet end Section

Slurry (99% water and 1% fibre) would be pumped out ~~through the leadbox~~ ^{through a wire belt} through a slice onto a ~~wire belt~~ ^{wire belt} gauze.

This wire belt gauze would vibrate to drain any water and raised ~~spade~~ ^{raised patterns} to interweave/weave the fibres together. ^{be used to}

Any ~~patterns~~ ^{raised patterns} on the wire belt gauze would ~~create~~ ^{be used to} water marks. ~~on the~~

Chosen section Press Section

hips and rollers would wring out ~~any excess~~ ^{most of the} excess water in the slurry turning it into a rough paper.

This is also where the thickness of the paper would be made. The gap between the rollers and paper would be adjustable to create differing paper thicknesses.

Chosen section Dryer Section

Heated rollers would be used to remove any moisture on the rough paper leaving only 4-6% of water.

This is also where ~~starched~~ ^{and} ~~fixing agents~~ ^{sizing agents} and sizing agents would be used on the paper to enhance the paper's quality.



ResultsPlus
Examiner Comments

This candidate has achieved full marks by providing a full description of each of the stages which they have selected. In each of their identified stages the candidate has noted at least two features of the process and has done so in detail.



ResultsPlus

Examiner Tip

Whilst it is better to write more than is required, in this case the candidate has spent a long time writing full descriptions of each stage. Questions such as this, which has 6 marks divided by 3 sections will normally be marked out of 2 per section, which should indicate the level of detail required.

Chosen section Wet end Section

The log from the tree used is saturated in water. At this point 99% is water. The moving gauge in which the water is moving on begins to vibrate causing it to turn into ~~no~~ ^{ground wood} pulp.

Chosen section press ~~press~~ Section

As the pulp leaves the wet end the next section is the press section. At this stage the pulp is pressed down hard from a roller causing the pulp to take the shape of the paper.

Chosen section Dryer Section

This ~~the~~ ~~middle~~ ~~upper~~ section is next. As the pulp continues to move along the procedure it is then fed through several rollers to dry the water that it left. At this stage the paper is becoming more visible.



ResultsPlus

Examiner Comments

This candidate has achieved 4 marks.

The response provided by this candidate is rather confused. They have noted that a vibrating gauze is used in the wet end section, however the response tends to indicate that this is used to produce a pulp. They have indicated that the press section uses rollers to begin to form paper. The candidate also indicates that water is removed during the drying process.



ResultsPlus

Examiner Tip

It is important to read the question fully. In this case the candidate gave a response about producing pulp rather than producing paper. Whilst credit could be given for some of the response in this case, this is unusual.

Question 3b

'Describe' questions require a response that is based around full detailed sentences, often linked together. In this case four separate points are needed for full marks.

This question focuses on methods of producing pulp, either chemical or mechanical. Candidates should not be describing a combination of the processes, but rather the process which they have selected themselves. It is important when approaching this type of question that candidates are clear which process they are writing about.

Chosen pulp: Chemical pulp
~~From the~~ Folding board made partly from
chemical pulp, would be made from a series
of process of which chemicals are used. ~~This~~
Bleach and other chemicals used take out lignin in
the ^{wood} material used for paper and



ResultsPlus

Examiner Comments

This response gains 2 marks.

The candidate names bleach as a chemical used in the production of chemical pulp and that this is used to remove lignin. Whilst not exactly correct, this is a typical response from candidates and gains the appropriate credit.

In questions such as this, a candidate would get no credit for stating that chemicals are used.



ResultsPlus

Examiner Tip

The candidate has been concise in their response, although the first part sets the scene for the response is not really needed and although it would only take a short time, could perhaps impact on marks later in the paper.

Chosen pulp: Mechanical Pulp

The wood logs are saturated with water and de-barked to separate the fibres. They are then ground down to ^{break} ~~soften~~ the lignin making it easier to create a pulp. The logs are then screened to 1-2mm in size, if they are any bigger they will be re-circulated to the right size. They are now ready to be processed into pulp. Mechanical pulp is ideal for bulk printing such as magazines and newspapers.



ResultsPlus Examiner Comments

This candidate has gained full marks. They have stated their chosen pulping process, and then provided a fully detailed description of the process. Their answer is in such detail that all the marks which could be awarded had been given before the end of the response.



ResultsPlus Examiner Tip

Whilst it is not advised to write 'around' a subject with everything a candidate knows, where a candidate does have a good knowledge of the subject it is often a good idea to write a detailed description in order to be sure of gaining full marks.

Question 4a

This question focuses on the safety features of an industrial die cutting machine. The focus is NOT on the benefits of using such a machine, nor how it works.

As an 'explain' question, to gain full marks the response should be full sentences, i.e. a point with a valid linked explanation of that point.

There will be an emergency stop button which
or a numerous amount in a factory that can be
pressed which will kill the power and stop the machine
if anything is going wrong.



ResultsPlus

Examiner Comments

This candidate has gained full marks, as they have identified the feature (emergency stop) and how this makes the machine safer (kills the power, if anything goes wrong). The use of an emergency stop was a popular response amongst candidates.



ResultsPlus

Examiner Tip

When a question asks 'explain', candidates should justify points which they make, as has been done in this instance.

Die-cutting machines have two separate buttons of
which must be pressed at the same time for a net
to be cut. This ensures that no hands are in the
area of cutting when the box nets are created.



ResultsPlus

Examiner Comments

This is a high level response which gains full marks. The candidate correctly states that two buttons need to be pressed at the same time and then explains in detail the reasons why this is the case.



ResultsPlus

Examiner Tip

Justification of an initial point is vital when answering 'explain' questions. Full marks will not be awarded if a series of unrelated points are presented as an answer.

Question 4b

This is an 'explain' question and therefore requires a valid point and a relevant (and related) explanation. It is not sufficient to write single word answers, or a collection of unrelated points.

The question focuses on the advantages of die cutters over traditional methods. Material costs and other factors which would be related to each are therefore irrelevant, as these apply to both. The concept here is that die cutters offer greater levels of productivity, either by producing nets much more quickly, or increasing accuracy. The stated point must however provide a comparison to traditional methods, such as 'nets can be produced with greater accuracy than can be achieved using traditional tools as human error is removed'.

It can cut and score at the same time, so it is very efficient to have when mass producing something as it speeds the process up, which reduces the time spent getting the product to the consumer.



ResultsPlus

Examiner Comments

This response gains full marks as there is a valid point with a justification. The candidate states that the die cutter can cut and score at the same time, then gives several points to justify this as an advantage over traditional methods.



ResultsPlus

Examiner Tip

When a question asks for something to be explained, candidates should provide a justification. In this case, the question asks to explain an advantage, therefore there should be some comparison to traditional methods.

when using a die cutter you can cut multiple
sets of card at the same time and by doing
this it reduces the overall cost because it
can be used for large batches.



ResultsPlus

Examiner Comments

This candidate gains one mark for stating that the die cutter can be used to cut multiple sets of nets at the same time. However, they have not justified this in comparison to traditional methods, with the statement 'reduces overall costs' too vague to award a second mark.



ResultsPlus

Examiner Tip

When asked to compare two processes, it is important that the justification relates to both. In this case, if the candidate had stated that it reduces the overall cost when compared to cutting out the same number using traditional methods, then they would have gained a second mark.

Question 4c

This question tests the candidates wider knowledge of quality control and asks them to explain the term. In this instance, candidates are expected to provide a response which identifies three key features of quality control, rather than justifying individual points.

quality Control is the process of checking the product for its Solubility and to see if it ~~more~~ matches the correct Standards required. This may be a regular check of every one in one-hundred or a reduced number of one in every twenty-five. The more expensive the product, the less tests will be done.



ResultsPlus Examiner Comments

This response gets one mark for identifying that quality control is used to check if a product meets the correct standards required. The remainder of the response is rather vague and makes no mention of when or why checks may be needed. The statement about sampling does not gain any credit.



ResultsPlus Examiner Tip

To improve this response the candidate could have stated what needs to be checked in order to make sure standards are met, such as dimensions or accuracy.

Quality control is the regulation in consistent quality of a product. This can be checked in many ways such as with measurements or weights, and tolerances are used as standards as to whether a product serves its purpose correctly and meets necessary criteria. QC can also be checked through destructive or non-destructive testing, depending on the product.

**ResultsPlus****Examiner Comments**

This response gains full marks. The candidate has stated that quality control is used to check tolerances, to check it meets necessary criteria and that testing is used which could be destructive or non-destructive.

**ResultsPlus****Examiner Tip**

This is a thorough response through which the candidate demonstrates a good understanding of quality control. Points are linked and presented logically.

Question 4d

This question tests the candidates wider knowledge of quality assurance and asks them to explain the term. In this instance, candidates are expected to provide a response which identifies three key features of quality control, rather than justifying individual points. There is no credit for providing a description of quality control procedures.

Quality assurance is checking the entire process of production against specification / risk assessments. A QA would contain many quality controls to ensure the product is suitable for the consumer.

**ResultsPlus****Examiner Comments**

This response would gain full marks as the candidate has identified three key features of quality assurance. First they have stated that it is the checking of the entire process, a further mark is then achieved for stating that this is against a specification. A third mark is also awarded for stating quality controls ensure the product is suitable for the consumer (fit for purpose).

**ResultsPlus****Examiner Tip**

Whilst not a model answer, this candidate has identified three key points in their response. Questions such as this are best answered in paragraph form rather than bullet points

Quality assurance is the method used to make sure that the quality of the product is as high as it can be, by checking that all components and raw materials are within strict tolerances set out by the specification, and making sure that the processes in the manufacture of the product are as efficient as possible and are done to a high enough degree using quality control; all in order to make sure that the product is done to the highest quality possible.



ResultsPlus Examiner Comments

This response gains full marks and is presented in a logical way which assists the examiner in marking. The candidate states that quality assurance is used to make sure a product is the highest quality it can be (fit for purpose), that all materials/components meet the specification and these are achieved using quality control checks.



ResultsPlus Examiner Tip

This is a good response which presents ideas logically. Answers such as this demonstrate the knowledge of the candidate clearly and are easier for the examiner to mark.

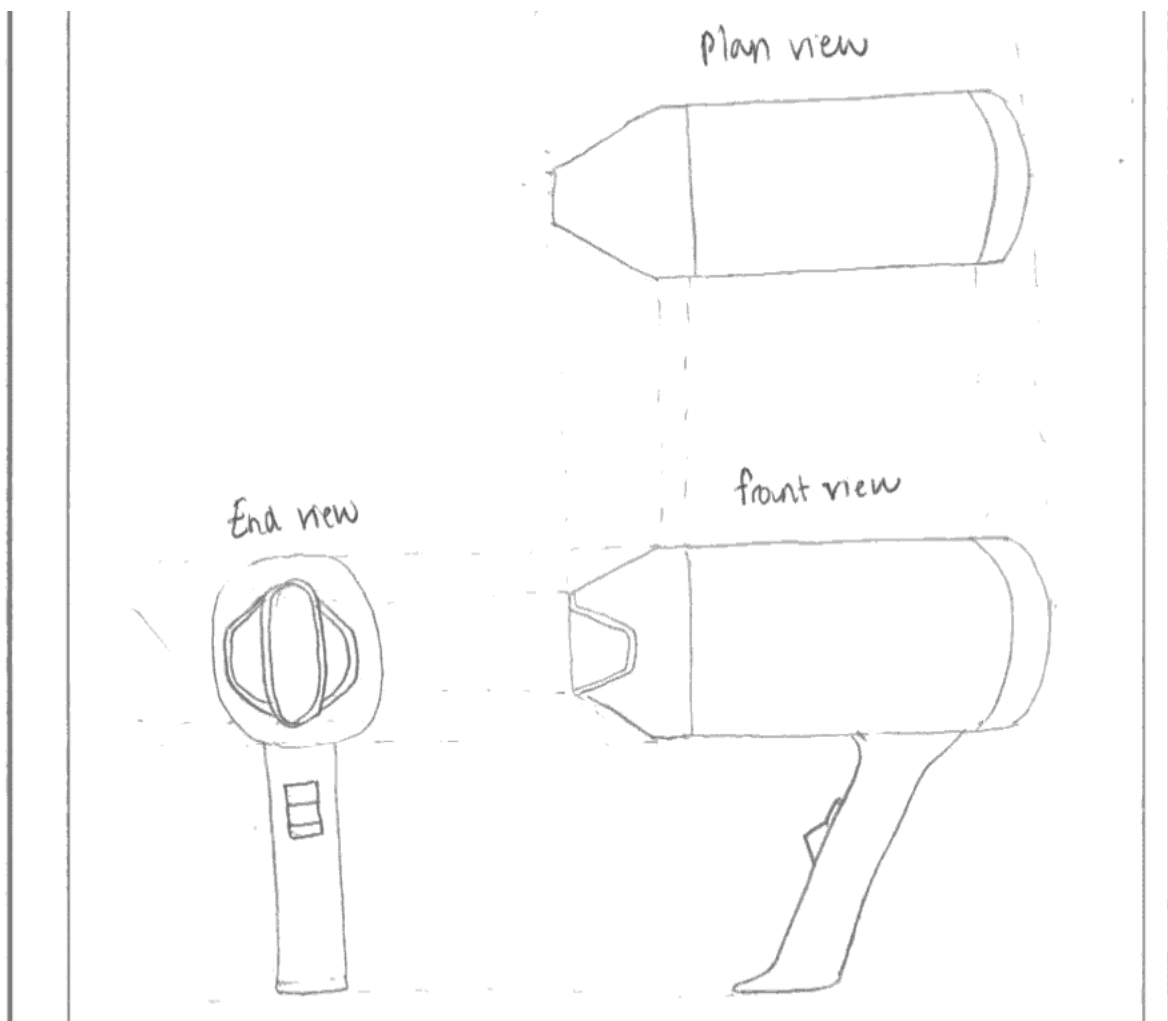
Question 5a

This question allows candidates to show their drawing skills while in an exam situation. The question asks the candidates to 'draw', therefore candidates should endeavour to draw as neatly as possible. Candidates need to practise drawing for AS exams.

This question focuses on translating an isometric drawing into a third angle orthographic projection. In this case, it clearly specifies in the question a 'third angle projection'. Therefore, a first angle projection, or any other layout produced would not achieve full marks.

The 'ideal' response required candidates to draw a front view, plan view and end view. This needed to show the air outlet, the switch and the handle. The drawings needed to be in proportion to gain the full marks.

It is useful to refer to the published mark scheme when looking at the examples to clearly see where marks are given and the alternatives that are acceptable.



ResultsPlus
Examiner Comments

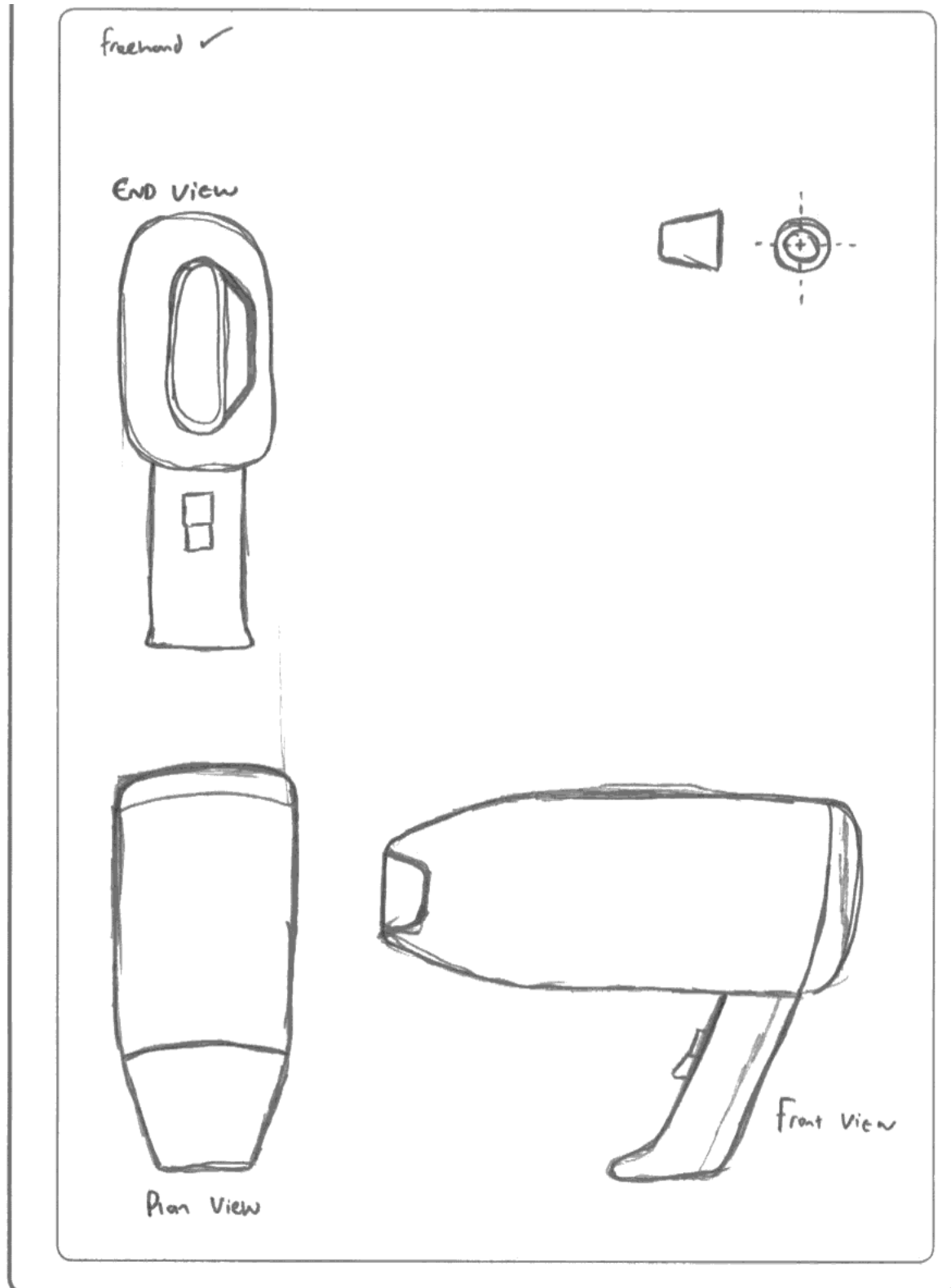
This response gains full marks, as the drawing is correctly laid out as a third angle projection. Each view is shown in proportion and the required features are shown.



ResultsPlus

Examiner Tip

When completing drawing questions it is good practice to use the space wisely, to take care with presentation and to ensure that the drawing is legible. Normally there is a full page to produce the drawing, all of which can be used.





ResultsPlus

Examiner Comments

In this case, the candidate gains 3 marks for producing a front view of the hairdryer. Further marks have been awarded for the switch on the end and front views and the air outlet again on the front and end views.

The layout is not third angle, the symbol indicates first angle (it isn't) and the views are not drawn in proportion.



ResultsPlus

Examiner Tip

The candidate made good use of the space and produced a neat drawing. The labelling of each view is a good idea although not required.

Question 5b

The specification lists numerous materials and processes, some of which may not be commonly used in schools. This question requires the candidates to have knowledge of one of these materials, i.e. coated printing paper.

This is a 'discuss' question that requires a response based around full and detailed sentences relating to the suitability of coated printing paper for the booklet which accompanies the hairdryer. In this case, three separate points are needed for full marks.

It is acceptable for a candidate to provide bullet point responses providing these are detailed.

The Coated Printing Paper is used for various reasons. one of the reason would be the image can be easily printed onto it, so the image of my drawing would also be easily printed onto the paper. Another Reason why Coated Printing Paper is used would be the Coated paper coated images that printed onto the Coated printing paper has an attractive aesthetic looking ~~special~~ specially ~~drills~~ day lighter.



ResultsPlus

Examiner Comments

This response has gained zero marks. This is because the candidate has provided a generic statement which is not specific to coated paper (image, easily printed onto the paper), this does not relate to why coated paper is used. The remainder of the response is vague and does not answer the question.



ResultsPlus

Examiner Tip

When asked for specific reasons, candidates should avoid stating 'easy to print on', 'low cost', 'looks good'. In this case specific responses such as 'increased durability', 'coating can be glossy' etc are appropriate.

It can come in many finishes including matt, gloss and satin, which would give the book a better visual appeal. It has a flat smooth surface which is excellent for printing on therefore the printing quality will be high. It is inexpensive when brought in a bulk, therefore will be a inexpensive to buy as lots loads of the leaflets will be made.



ResultsPlus

Examiner Comments

This response gains full marks as the answer is detailed and gives reasons why coated printing paper is used, along with the features of the paper. The candidate states that a range of finishes are available, that the surface is flat and smooth and this increases the quality of the printing.



ResultsPlus

Examiner Tip

The candidate has given specific responses which relate to the properties and suitability of the paper. The answer flows logically with points being linked. This demonstrates good understanding and allows examiners to recognise this.

Question 6a

This is an 'explain' question and therefore requires a valid point and a relevant (and related) explanation for each of the two advantages and the disadvantage. It is not sufficient to write single word answers or a collection of unrelated points. A valid point without expansion will only gain one mark.

The question focuses on the use of comb binding, rather than comparisons with other forms of binding, therefore comparisons with perfect binding or other methods are not relevant. The question focuses on the suitability of the binding method for a batch produced booklet, therefore it is appropriate for candidates to include cost, appearance and durability in their answers.

You can lay the booklet down flat so the user can read off the page easily

Advantage 2

A relatively good ~~usual~~ quality inexpensive so saves money on the unit cost of the booklet

Disadvantage

It isn't durable so the pages could fall out & relatively easily



ResultsPlus Examiner Comments

This response gains 5 marks, as the second advantage is not expanded upon. The first advantage gains two marks for stating that you can lay the book flat and a further mark for stating this allow the user to read the page easily. Only one mark is awarded for the second advantage (relatively inexpensive) as this is not expanded upon.

There are two marks for the disadvantage as the point about not being durable is expanded upon to explain that this could cause pages to fall out.



ResultsPlus Examiner Tip

With explain questions, answers must be expanded upon or justified. Single word answers will not achieve high marks.

Comb - Binding is very inexpensive method of Binding paper, this is good for batch production as it can save money.

Advantage 2

Comb - Binding is easily done on a batch production scale, machines usually fit the binding and this can be done in seconds allowing for better productivity etc.

Disadvantage

Comb-binding may not be the best long-term solution for the lifetime of the booklet, it can easily fall off resulting in page loss or damage to the booklet.



ResultsPlus

Examiner Comments

In this response, the candidate gains four marks. There are valid points for both of the advantages, however given that in the first statement about cost, the expansion considers batch production, the candidate does not gain further marks for their second advantage which also considers batch. Candidates do not get credit for the same information twice.



ResultsPlus

Examiner Tip

In 'explain' questions answers must be expanded upon. A series of unrelated points will not gain full marks, while it is also important to ensure that when asked for more than one advantage or disadvantage that these are significantly different.

Question 6b

This is an 'explain' question and therefore requires a valid point and a relevant (and related) explanation in order to gain both marks. It is not sufficient to write single word answers, or two unrelated points. A valid point without expansion will only gain one mark.

The question focuses on the disadvantages of side wire stitching, rather than the usual advantages. As such, this requires candidates to read the question fully and answer the question as given. There is no need for comparisons with other forms of binding, therefore comparisons with saddle stitching or similar are not relevant. The question focuses on the disadvantages of the binding method for a batch produced booklet, therefore candidates are likely to consider ease of use and appearance in their answers.

It Staples along the edge which means you need to fold the paper and can not be layed flat on a table.



ResultsPlus Examiner Comments

The candidate has gained two marks for their response. They have indicated that the staples are along the edge of the paper, which means the cover needs to be bent backwards and this makes it difficult to lay the booklet flat on the table. This is a full yet concise response which shows good understanding.



ResultsPlus Examiner Tip

Explain questions must be justified or expanded upon in order to gain full marks. This does not mean that every answer needs to contain 'because', rather that reasons need to be given.

Side-wire stitching is expensive in comparison to comb binding



ResultsPlus Examiner Comments

This answer gained the candidate zero marks. Firstly there is a misconception that side wire stitching is expensive, then the comparison to comb binding. Such a comparison is not asked for, therefore no credit can be awarded even if correct.



ResultsPlus

Examiner Tip

Unless the question asks for a comparison, candidates will not gain credit for including one in their answer.

Question 6c

As an 'outline' question, candidates need to write four valid points only. The question focuses on the features of RFID systems rather than the uses of these systems. Responses should focus on these features, with only minimal credit being given for points related to uses. For full marks candidates will need to show that they understand how the system works and are able to identify some of the key features of RFID systems.

An RFID system works with 2 parts. A transmitter (tag) is placed on a product, such as on the packaging of the hairdryers. The receiver can scan for these tags and receive details about them. The transmitter tag can either be ~~be~~ Active or passive. When they are active, they are always on and can be picked up from longer distances (about 10 metres). When they are passive they run off of the power of the receiver and so they only work at a much shorter range. Active transmitter tags require batteries so it is not long lasting. RFID systems can be used to track products and are useful during stock checks in stores and warehouses. It has all the information about each product and its location stored. (Total for Question 6 = 12 marks)



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Examiner Comments

The response here gains full marks. The candidate has identified clearly that the system can use either active or passive tags which are attached to the product. There is an indication of two way communication in the answer and that the tag contains information about the product. The candidate has made some errors in their answer by mixing up transponders, transmitters and receivers, however there is evidence of a sound basic understanding of the system and credit is therefore given.



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Examiner Tip

'Outline' questions are best approached by writing in full. In this instance although there are some errors, because the candidate has written in full, their understanding of the system is evident, whereas if presented in bullet form this knowledge would not be evident.

This is when radio frequency is detected,
and it means that they are able to
put the amount of technology and frequency
into one hair dryer. It means that
can make it so the hair dryer can
be just as powerful as another. Also
making that it works without over
heating.



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Examiner Comments

This response is typical of a candidate who lacks knowledge about a subject and gains zero marks. The candidate has produced what looks initially like a reasoned answer, whereas in fact it is simply the question re-worded several times.



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Examiner Tip

Candidates do not gain credit for repeating the content of a question, which means that responses such as this will not gain marks.

Question 7

Evaluation questions require candidates to answer fully, using detailed justified responses that flow in paragraph form. Short responses for evaluation questions gain little credit.

Candidates must ensure they include reference to both offset lithography and gravure for maximum marks. In this case, only presenting one process will result in a maximum of 6 marks rather than 7.

The focus of this question is the use of the printing processes for batch producing booklets, rather than how each of the processes is carried out.

Offset lithography is the widest use printing process in the UK, so would be readily available. It is a very fast printing process so many copies could be made quickly. However, because of the water used, the paper may deform due to dampening, and it can only print on a flat surface. Whereas in gravure the ink dries on evaporation. Gravure is the widest printing, so lots of copies could again be made quickly. Lots of colours can be created ~~by~~ but must go through several different rollers, as opposed to offset lithography where another tone can simply be added. Gravure is not as high quality look as lithography because you can see each individual dot on the page*. Also, it takes more time + money to make the engraved plates in gravure and they can only be used once. Overall, offset lithography is a much easier and quicker process than gravure, and would be best suited to make the booklet. *but you can control how light/dark tones are through depth of hole. ink hole.

(Total for Question 7 = 8 marks)



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Examiner Comments

This response would gain two marks, both awarded for comments relating to gravure - time and money to engrave plates (expensive) - 1 mark; ink evaporates - 1 mark.

There are several misconceptions in the answer, hence the lower mark.



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Examiner Tip

The question asks for an evaluation of the use of the processes rather than a comparison of how the processes are carried out. In this case, the candidate has not fully answered the question.

Paper Summary

In the AS graphics exam candidates need to be able to demonstrate both their knowledge and understanding of the subject along with their drawing and design skills.

In order to do this effectively and based on their performance on this paper, they should:

- read questions thoroughly so that they understand the focus of each specific question
- give answers which include only the information which is asked for and not everything they know about the subject
- produce neat and well presented sketches and drawings
- annotate diagrams and sketches with detailed information.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

<http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx>

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