

ResultsPlus

Examiners' Report June 2010

GCSE Design and Technology 5TT02

ResultsPlus
look forward to better exam results
www.resultsplus.org.uk

Edexcel is one of the leading examining and awarding bodies in the UK and throughout the world. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers.

Through a network of UK and overseas offices, Edexcel's centres receive the support they need to help them deliver their education and training programmes to learners.

For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our website at www.edexcel.com. If you have any subject specific questions about the content of this Examiners' Report that require the help of a subject specialist, you may find our **Ask The Expert** email service helpful.

Ask The Expert can be accessed online at the following link:

<http://www.edexcel.com/Aboutus/contact-us/>

ResultsPlus

ResultsPlus is Edexcel's free online tool that offers teachers unrivalled insight into exam performance.

You can use this valuable service to see how your students performed according to a range of criteria - at cohort, class or individual student level.

- Question-by-question exam analysis
- Skills maps linking exam performance back to areas of the specification
- Downloadable exam papers, mark schemes and examiner reports
- Comparisons to national performance

For more information on ResultsPlus, or to log in, visit www.edexcel.com/resultsplus.

To set up your ResultsPlus account, call 0844 576 0024

June 2010

Publications Code UG023757

All the material in this publication is copyright

© Edexcel Ltd 2010

Introduction

This is the first year that the newly structured paper has been sat and as such the candidates experienced the new format that began with the multiple choice section and followed the more traditional design section in the middle. The multiple choice section of questions 1-10 worked well as an introduction to the paper as it tested a wide range of the specification at a medium to low level. The general level of responses gave the impression that this is a young cohort that would benefit from more time to consolidate their knowledge and understanding.

Question 11(a)(i)

This is a standard formatted section of the paper where knowledge of tools, components and equipment is tested. The candidates were very successful in matching the name to the equipment although spelling was an issue for some but marks were still awarded to those that demonstrated a clear understanding. Those that were not awarded marks lost them for incorrect meanings eg 'measuring lace' or descriptive ones rather than the naming of the item such as 'body measurer'.

Question 11(a)(ii)

Although a high percentage of candidates got this question right, marks were only awarded for specific uses of the embroidery ring. This question proved quite difficult for the very low ability candidates as they would repeat the information given or very generically state its use as to 'hold fabric in place' as is the function of many forms of tools and equipment.

Question 11(a)(iii)

Question 11a(iii) also dealt with the naming of a common workshop tool. This tool does have a range of commonly used names and this coverage in the markscheme meant that candidates scored highly as only the incorrect name or description of the tool was not allowed.

Question 11(a)(iv)

The last item was very well answered with very few candidates getting it wrong. As pins do have a basic function eg 'to hold fabric in place' as well as other practical every day uses that candidates seemed familiar with.

Question 11(b)

To answer this question, candidates needed to know what patchwork is and how it is environmentally friendly. The popular responses focussed on the use of fabric scraps and old materials and the fact that re-using means less use of landfill and less generation of new fabrics. Those that misunderstood would write about it being used as a 'patch to cover faulty fabric'. Most candidates scored at least 1 of the 2 marks available.

(b) Describe why patchwork is environmentally friendly.

(2)

because you only buying small amount of material instead of in large quantities.

Question 11(c)

This question tested candidates understanding of technical terminology. Many candidates could give the reasons why a toile is made but a significant amount found it difficult to give a second reason or advantage of this before full scale manufacturing. Marks were not given for descriptions of a toile or for answers that thought it would give insight into how many would be sold in shops. A small proportion left this question blank.

(c) Modelling and prototyping take place to help develop textile products.

Give **two** reasons why a toile is made before full scale manufacturing takes place.

(2)

1. So they can see how well it will fit.
2. To see if they have to make any changes e.g adjusting in certain places.

Question 11(d)

From this 2 mark question many candidates who attempted it gained at least 1 mark. Common responses included it 'can cut more than one at a time' and references to the speed of the process, although technical terms such as 'layers' or 'plies' were not often used. More able candidate's responses related to productivity and mentioned 'more products & greater profit'. A larger proportion left this question blank than the previous one.

Question 11(e)(i)

An able candidate would use language such as 'shift, move and slide as an alternative word to describe the movement caused when fabric or machinery slips over each other. They would then go on to describe the problems that could occur and considerations needed by the manufacturer for the second mark. Those that lost marks usually mentioned cutting with scissors or health and safety hazards.

They need to consider this so they are careful when cutting and dont make the scissors slip so that the fabric rips.
(cutters) (ii) Give two reasons why a manufacturer needs to consider how thick the fabric is when cutting in high volume production.

Question 11(e)(ii)

The next related question had mixed responses where a number achieved a mark by taking into account the depth the thick fabric could comfortably be layered to and still achieve an accurate cut. Not many justified this question well and 1 mark was much more commonly awarded than 2.

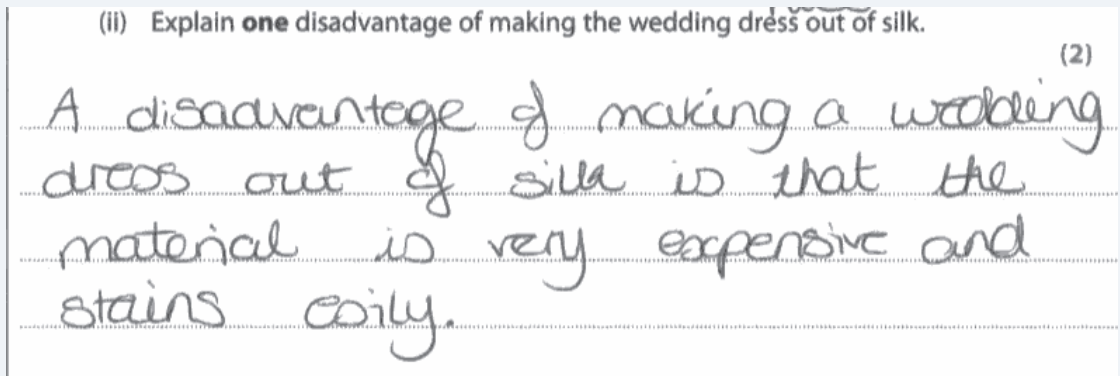
Question 11(f)(i)

Knowledge of silk's properties both fibre and fabric were good with many candidates able to give a property although more practise will be needed to ensure that they explain them better. High end candidates scored the full 2 marks, where 1 mark was quite common where candidates tended to repeat the stem or give generalised answers like 'looks nice, beautiful, shiny and lightweight' thus not attaining that second mark.

Question 11(f)(ii)

This was less well answered than the former linked question. Whilst being ‘expensive’ was the most common response of the disadvantage of silk the lack of justification of the point again made some candidates unable to obtain full marks. Where some candidates would justify ‘why’ with ‘it would cost more to make’ improved responses clearly related it to cost of production and the amount of fabric used in manufacturing a wedding dress.

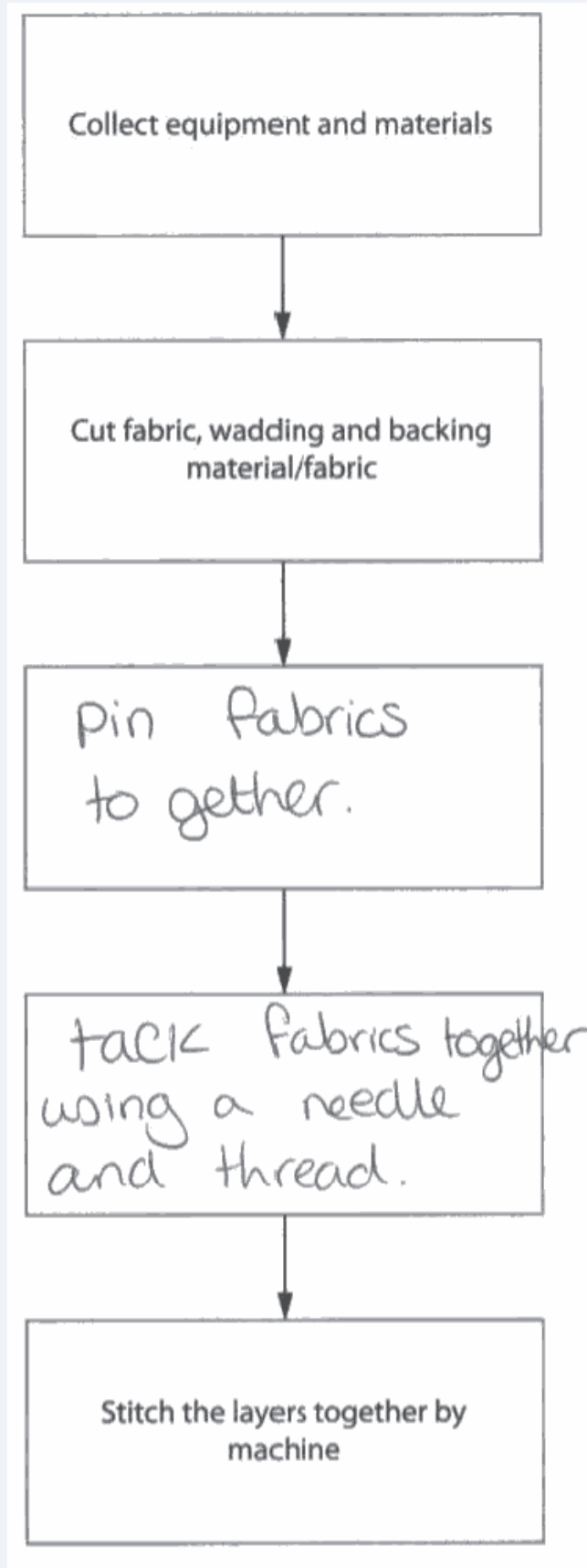
(ii) Explain **one** disadvantage of making the wedding dress out of silk. (2)



A disadvantage of making a wedding dress out of silk is that the material is very expensive and stains easily.

Question 11(g)

Candidates seemed to either know the main stages needed to complete the quilting process or guessed them. Very few empty spaces were left so a good number attempted this question although there were many wrong answers.



Question 12

The design question demonstrated an increased awareness by candidates to annotate the specification requirements around clearly drawn designs in order to achieve greater marks. Many candidates addressed each specification point methodically (sometimes numbering each one) and these tended to be the ones who achieved close to full marks. Generally a well answered question where only those that failed to complete a second design or closely repeated the first failed to score double figures.

Design idea 1

Shoulder straps to hold garment up.

20cm Velcro to hold the towel together when wrapped around.

as it is waterproof and still holds together

10cm

120cm

Towel fabric as it is breathable machine sewed on.

30cm

different coloured ribbon so it is unisex.

Pocket to put goggles swim hat etc.

inside 90cm

white towel fabric can match with any swim wear. (8)

Design idea 2

20cm

20cm

25cm

80cm

5cm

Peppers so you can change the head design.

different head design to make it suitable for girls and boys.

head to dry child's hair.

hole for child's head.

lastly elasticated so child's head doesn't get stuck

Towel material as it is breathable and quick drying.

sewed on or by using CAM

cotton made flowers as this colour! is also breathable

This garment covers the whole body so the child won't get cold when coming out of the water and also dries quicker

(8)

(Total for Question 12 = 16 marks)

Question 13(a)

Candidates were able to give properties of denim, most commonly they would give 'durability/ hardwearing' and 'warm'. Justifications of durability tended to be correct eg 'it will not easily rip so can withstand daily wear & tear', although for 'warm' or other properties there was a lack of knowledge. Links to it being a closely packed construction of the yarns were not made. 2 out of 4 marks were commonly awarded as the second property and/ or justification tended to be incorrect.

The term 'strong' on its own is not acceptable; it should be qualified as strong in tension for instance. Better terms are tough or robust. The property given in the clip as strong is incorrect, but robust is mentioned in the justification, so this would be credited as the property mark'.

(a) Give **two** properties of denim fabric that make it suitable for this jacket.

For each property, justify your answer.

(4)

Property 1

Strong

Justification

Denim is strong and durable so it will last through an active summer

Property 2

easy-care and stain-resistant

Justification

This means that it washes and irons easily and stains can be washed off easily. In the summer this is good because of grass stains etc. from being more active

Question 13(b)

Unfortunately, candidates seemed to struggle to distinguish CAD/CAM from CAD as many responses focussed on just the attributes of the single process instead of the combined benefits. Full marks were awarded to those that could clearly define two separate stages linked to both or would show the benefit of the combined process. The word 'quicker' without suitable justification is not advised. This question differentiated the higher end candidates.

(b) The designer wishes to add a motif to the jacket.

Describe **one** benefit of using CAD/CAM for this process.

(2)
Using a computer aid means the design can be completed accurately on more than one garment to make them identical.

Question 13(c)(i)

Candidates were generally able to score 1 out of the 2 available marks. These were commonly awarded for it being 'cool to wear'. Marks were lost for responses such as thin and lightweight.

Question 13(c)(ii)

As in the previous question the responses generally gained a mark of 1 although a higher percentage were able to explain their example giving a justification of their reasoning, so more candidates achieved a mark of 2.

(ii) It is easy to put on and take off.

(2)

It only has a few buttons and so it is easy to take off
The collar is low so it will be easy to take off over your head

Question 13(d)

The extended writing was well attempted by most with only the weaker candidates not reaching that part of the paper or opting not to try and answer it. A minority of candidates scored high marks but most were only able to access 2 to 3 marks.

This question will always be worth six marks and will ask candidates to compare two similar products against an issue from the specification.

Evaluate jacket A compared with jacket B in terms of minimising waste production throughout the product lifecycle.

(6)

Jacket A has little sections so not much waste material is binned. The buttons are environmentally friendly because they are wooden, from a sustainable forest. The decoration is cheap because there is only a bit of stitching and darts added which means nothing extra had to be made.

Jacket B has lots of sections so more waste material was produced in comparison to jacket A. The process of making the plastic buttons and acrylic fur trim would have made waste. There is also a lot of material in the bodice. It is quilted which means it would have at least 3 layers of material meaning a lot of mistakes could be made and a lot of waste material is being produced. This waste material is all ending up in land fill sites and jacket B is contributing more waste than jacket A.

(Total for Question 13 = 16 marks)

Question 14(a)

The knowledge of technical terms and equipment is still one that candidates must become more confident with and has made evident those that can recall specific types of equipment especially the computerised or electronic. They tend to be the higher end candidates who are not put off learning industrial or CAD/CAM machinery.

Question 14(b)

Candidates struggled to demonstrate the specific benefits of 3D modelling using CAD and their responses were on the whole quite basic. Many only gave the benefits of 2D design or designing on CAD and did not relate it to viewing it from all angles. The better candidates gave examples of being able to 'save material', 'have a realistic view' and then being able to 'easily communicate with the client'.

(b) Explain **two** benefits to the designer of 3D modelling using CAD.

(4)

1. It reduces the negative environmental impact. It uses less time in the designing process as it saves drawings etc. being done. It makes it quicker to change measurements and aspects of the design.
2. It gives a more visual idea of how the product will look from different angles and views and perspectives when it is made rather than just seeing drawings.

Question 14(c)

A low number of candidates knew that colour holds 'meaning' or there are 'rules/ traditions' that cultures adhere to and could give a justification of their significance to designer's considerations. The more successful candidates would use phrases such as 'designer's not insulting/ causing offence' and would give the situation where colour has an important meaning. These candidates gained full marks where many did not attain any.

Question 14(d)(i)

Candidates were thrown by the word 'feature' although as most gave an acceptable property this was no problem. Many candidates gained the 1 mark available.

Question 14(d)(ii)

This was a difficult question placed at the end of the paper that required candidates to distinguish between the introductions of new product to the market and relate the advantages to the consumer of this. Many could give a property of polartec that would gain them a mark but there were very few comparative explanations against a traditional fleece. The disadvantages were simply put down to cost eg 'more expensive' by many which was not the response required as more depth was needed to gain a mark for this 'the cost will be high initially because'. This was a low scoring question with the less able avoiding it completely.

Advantage

Polartec fleece is much warmer. More time
is spent on making it, ^{more work has gone into it.} so therefore is better
quality and more durable.

Disadvantage

Polartec fleece is much more expensive.
So therefore less people buy it.

Question 14(e)

This question required candidates to consider the advantages and disadvantages of the impact of off-shore manufacturing on developing countries. Candidates at the higher end looked at the plight of the workers and gave an advantage of them having a 'job' against getting extremely 'low wages' and 'living in poor conditions'. They may mention 'child labour' or 'sweatshops'. They often talk of the cycle of 'poverty lack of education' brings or the ability of 'fair trade' to improve situations. Generally, candidates scored 3 out of 6 marks for this question.

Paper summary

As this paper ran simultaneously with the Legacy specification the cohort for the new specification this year was much smaller than the consolidated cohort will be. As such the full range of candidates did not experience the paper and some of the findings and advice may differ greatly next year. As with other automated, electronic or computerised questions a larger than average amount of candidates leave this blank. This is obviously an area that needs greater reinforcement as the confidence to respond positively to these questions is typically low.

Grade Boundaries

Grade	Max. Mark	A*	A	B	C	D	E	F	G	U
Raw mark boundary	80	59	51	43	36	32	28	24	20	0
Uniform mark scale boundary	80	72	64	56	48	40	32	24	16	0

Further copies of this publication are available from
Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467

Fax 01623 450481

Email publications@linneydirect.com

Order Code UG023757 June 2010

For more information on Edexcel qualifications, please visit
www.edexcel.com/quals

Edexcel Limited. Registered in England and Wales no.4496750
Registered Office: One90 High Holborn, London, WC1V 7BH

Ofqual




Llywodraeth Cynulliad Cymru
Welsh Assembly Government

