

AS (NEW) DESIGN AND TECHNOLOGY - UNIT 1 FASHION AND TEXTILES 2602U10-1

All Candidates performance across questions

| Question Title | N | Mean | S D | Max Mark | F F | Attempt % |
|----------------|----|------|-----|----------|------|-----------|
| 1 | 66 | 6.3 | 1.5 | 8 | 79.0 | 100.0 |
| 2 | 66 | 4.8 | 2.0 | 8 | 60.2 | 100.0 |
| 3 | 66 | 4.8 | 2.0 | 8 | 60.4 | 100.0 |
| 4 | 66 | 3.4 | 2.0 | 8 | 42.8 | 100.0 |
| 5 | 66 | 3.6 | 2.3 | 8 | 45.5 | 100.0 |
| 6 | 66 | 23.7 | 7.1 | 40 | 59.2 | 100.0 |

- The new format of the paper was well received by candidates and centres. However, In general candidate's responses were disappointing as many were unable to demonstrate the depth of technical knowledge and detailed understanding anticipated at this level.
- As the content of the specification and the structure of the questions become more familiar to centres it is assumed that the responses of the candidates will access the higher marks.
- The format of this paper was consistent with the sample assessment material that has been available on the WJEC website; however, centres would be advised that this can change in future.
- Some centres reacted to the advice delivered during CPDs addressing the need for candidates to show more in-depth subject knowledge and its application in this form of question.

| | |
|-------------|--|
| Surname | |
| Other Names | |

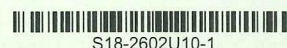
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GCE AS/A LEVEL – NEW

2602U10-1



DESIGN AND TECHNOLOGY – AS unit 1
Fashion and Textiles

MONDAY, 14 MAY 2018 – AFTERNOON

2 hours

| For Examiner's use only | | |
|-------------------------|--------------|--------------|
| Question | Maximum Mark | Mark Awarded |
| 1. | 8 | 7 |
| 2. | 8 | 5 |
| 3. | 8 | 8 |
| 4. | 8 | 1 |
| 5. | 8 | 1 |
| 6. | 40 | 37 |
| Total | 80 | 59 |

ADDITIONAL MATERIALS

A calculator, ruler, pencils and coloured pencils.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Answer **ALL** questions.

Write your name, centre number and candidate number in the spaces at the top of this page.

Write your answers in the spaces provided in this booklet. If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question. You are advised to divide your time accordingly.

The total number of marks available is 80.

You are reminded of the need for good English and orderly, clear presentation in your answers. The quality of your written communication, including appropriate use of punctuation and grammar, will be assessed in your answer to question 5.

Answer all questions.

1. Advances in computer aided design and computer aided manufacturing (CAD/CAM) such as 3D printing, have enabled many designers to create visual effects with their designs that otherwise could not have been realised.

The textile products shown below have been modelled using a 3D printer.



- (a) Explain **one** benefit of using a 3D printer to model ideas when making products like the ones shown. [2]

The designer can easily alter the design and have a clear idea of what the final product will look like which saves time in the designing process.

- (b) 3D images can be generated on screen, using CAD/ICT. Describe **one** advantage of modelling ideas in this way. [2]

It shows an accurate representation of the product which is more realistic than a hand drawn design.

- (c) Manufacturers regularly use laser cutters to support the manufacturing of textile products like the one shown below.



Discuss the advantages and disadvantages of using a laser cutter to the manufacturer.

[4]

Laser cutters can cut out ~~very~~ small details and create a design that cannot be achieved by hand. The laser seals the edges of the fabric once cut which stops it from fraying. However, designs may be limited depending upon the size of the machine as the required size of fabric may not fit. Laser cutters aren't suitable for the use on certain materials as they can melt, for example polyester. It can also leave brown/black edges on the material.



2602U101
03

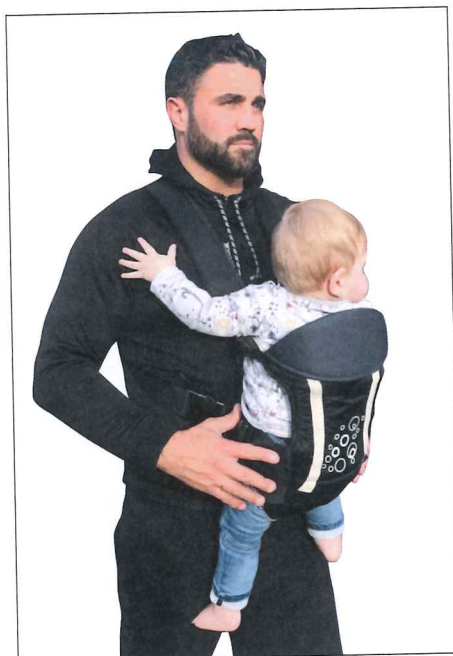
7

2. Designers use anthropometric and ergonomic data to ensure that a product is comfortable and safe for use.

(a) Explain how anthropometric data is used when designing a textile product. [2]

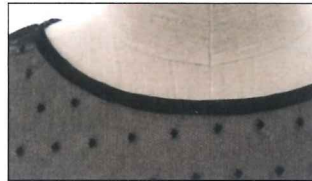
used to evaluate different factors that contribute to the product being comfortable and safe for use, every product will have different requirements.

(b) Describe in detail the importance of ergonomics when designing a baby carrier like the one pictured below. [6]



Ergonomics is important in this product because the baby needs to be safe and secure in the carrier. The straps need to be strong and cushioned for comfort of the wearer and safety of the baby, the straps must not be able to snap or break. The carrier itself must be cushioned and lightweight as it's important for the baby to be comfortable, this would also ensure it isn't too heavy for the wearer. The clip buckles fastenings must be secure so the baby can't fall out of the carrier. They should also not be able to dig into the baby and cause discomfort.

3. The designer sheer top shown below is made from silk organza. French seams have been used in the construction of the top.



Product details:

- 100% silk organza
- £80
- Double frill detail on sleeves
- Frill detail on front and back
- French seams
- Binding on the neckline and hem

- (a) Explain why a French seam would be the most suitable seam to use for the top. [2]

It would be most suitable because it is more discrete and aesthetically pleasing which is important as the sheer fabric will make the seams visible. It's a tidy seam which would reflect in its high cost.

- (b) The designer top above retails at £80. Discuss the ways in which the designer could reduce the overall cost of the top. [6]

A way in which the designer could reduce the overall cost of the top is to use a different sheer fabric or a blend with silk organza as 100% increases the price. A synthetic mesh could be used as it would be cheaper. The cost could also be reduced by using a double turn hem instead of the binding on the neckline and hem. The frill detail on the front and back could be removed, leaving only the double frill on the sleeve. The double frill could be replaced with a single frill.

4. Non-woven bonded fabrics like the one shown below are widely used in the home, healthcare and in industry.



Evaluate the use of non-woven bonded fabrics in disposable products in a wide range of situations. [8]

Non-woven fabrics are strong ~~as they are bonded~~

~~and are disposable~~





5. The denim jean is one of the most iconic fashion pieces in history. In the last few years designers have been focused on producing fashionable jeans which are also friendly to the environment.

Describe the ethical and sustainable factors that designers and manufacturers should consider when producing a new pair of jeans. [8]

Marks will be awarded for the content of the answer and the quality of written communication.

Designers should consider factors such as choice of material and components. Natural materials such as cotton-denim would be more sustainable (natural) and environmentally friendly. They should consider recycling old jeans ~~and~~

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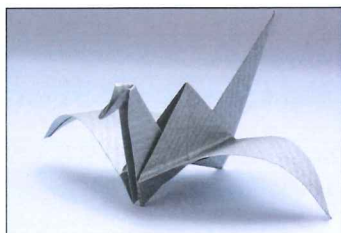
6. Design brief

Issey Miyake is a very successful fashion designer who is known for his technology-driven clothing and products.

A bag from the Bao Bao Autumn Winter 2017 collection is pictured below. Angular lines inspired by architecture, origami and vivid colours typify this collection.



Bao Bao bag



Origami bird



Architectural building

Design a wearable **outfit** for a young man or woman based on the Issey Miyake Bao Bao collection for an occasion of your choice.

- (a) Write a detailed and justified **four** point specification based on the brief that you have been given. [8]

State the occasion: evening wear

Point 1:

Must be a wearable outfit for a young woman to wear
based on the Issey Miyake Bao Bao collection.

Justification:

It must be suitable to wear to an evening event

Point 2:

It must include vibrant colours and angular lines

Justification:

This would clearly display the influence of Miyake's
work

Point 3:

It must contain a longer skirt at the back, being shorter at the front.

Justification:

Provides ~~an~~ a unique look to the design.

Point 4:

~~It~~ ~~must~~ ~~be~~ It must be an innovative dress, including pleats and sleeves.

Justification:

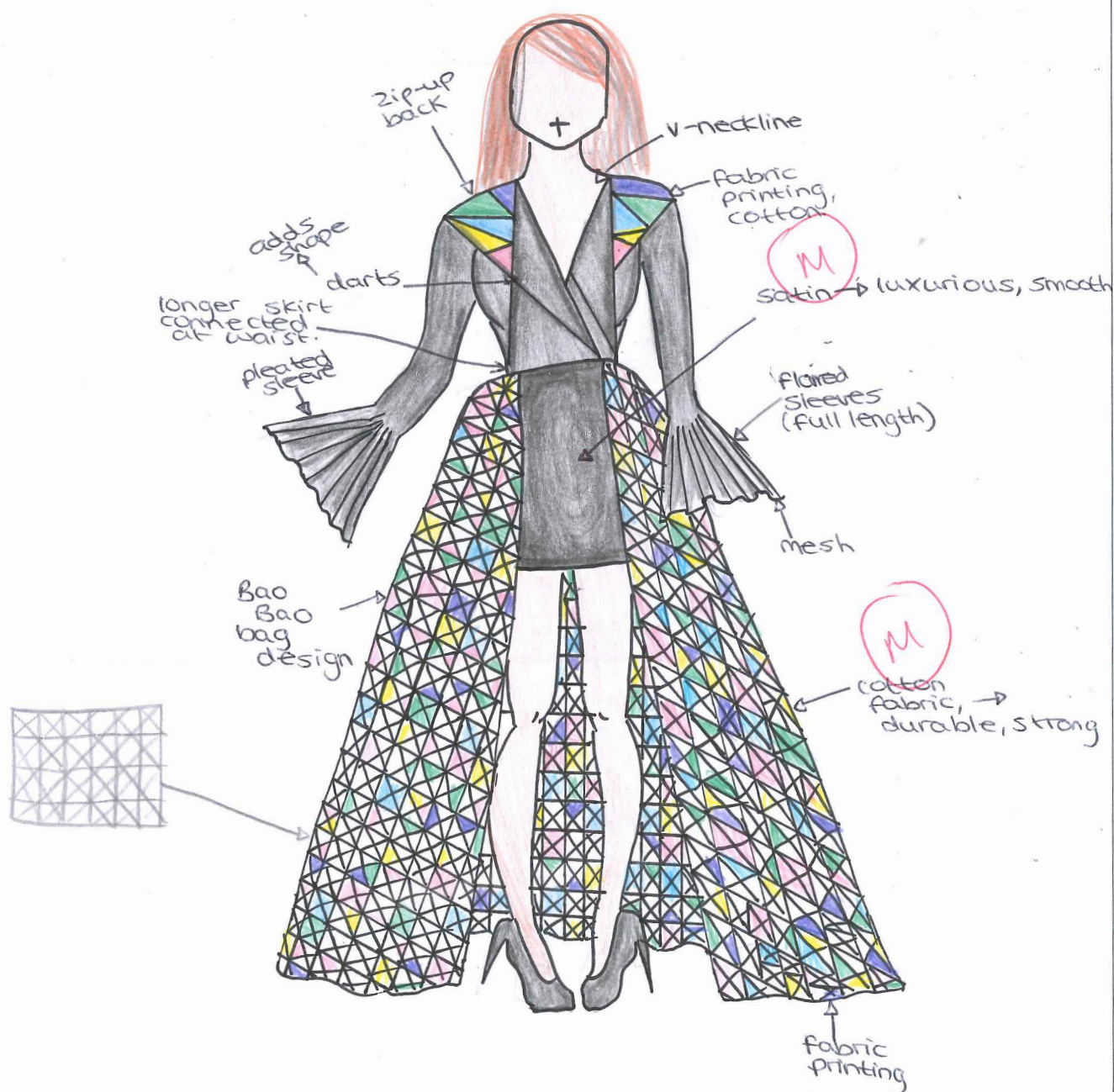
The innovation should present the garment as like ^{an} "art show" as Miyake's work is displayed.

(b) Sketch your wearable outfit for a young man or woman in the space provided below.

Marks will be awarded for:

- (i) An outfit which reflects the Bao Bao collection.
- (ii) The creativity and originality of your idea.
- (iii) Quality of communication.
- (iv) Labelling a minimum of **two** suitable materials.

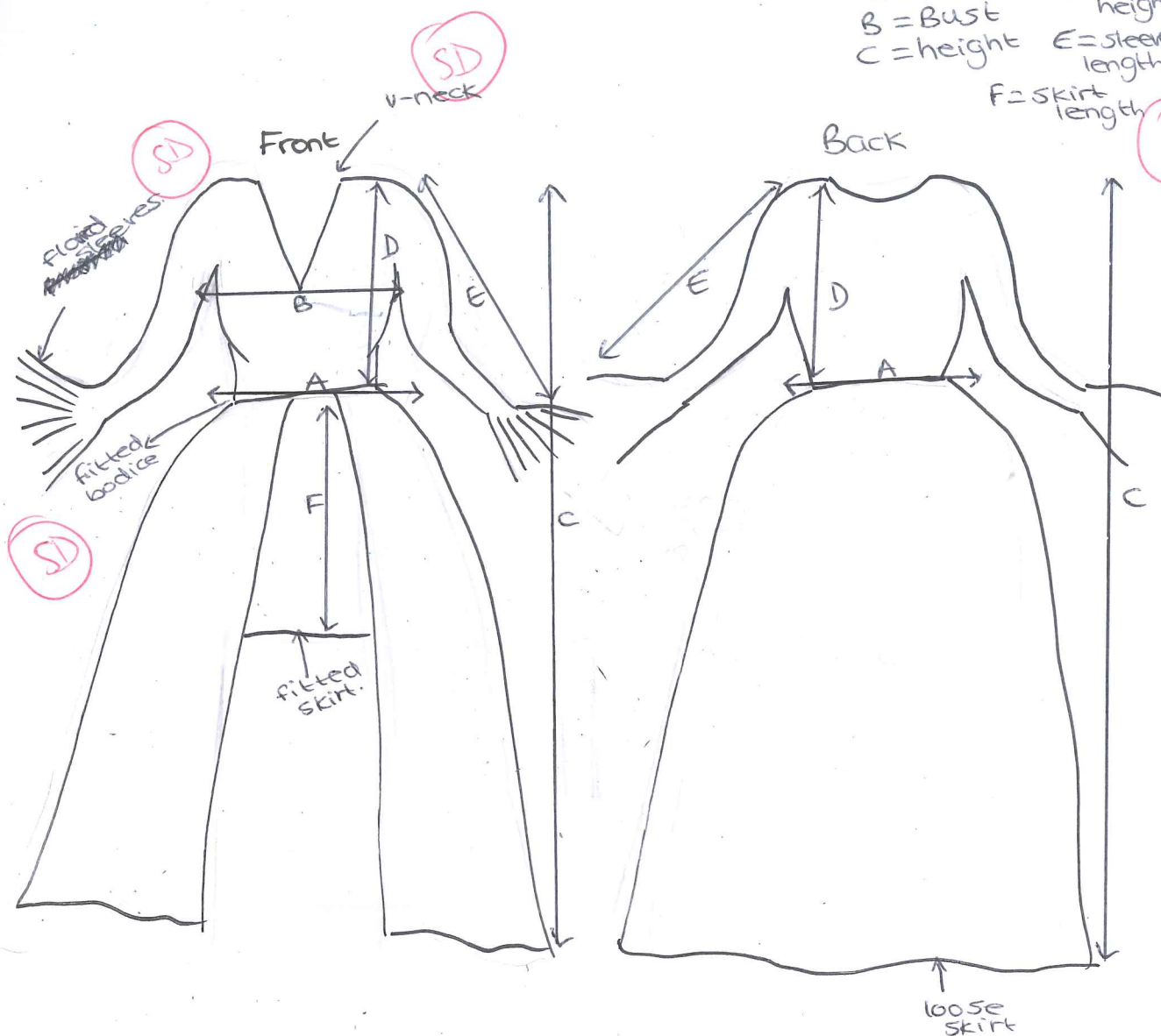
[2] 22
[2] 22
[2] 22
[2] 22



- (c) Using notes and sketches produce a manufacturing specification drawing for your outfit in the space below.

Marks will be awarded for:

- (i) A technical/line drawing of the front and back of the outfit. [4]
 (ii) Labelling of construction and style details. [4]

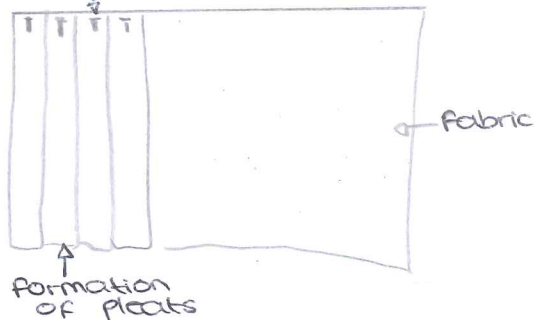


- (d) Using notes and diagrams explain in detail how you would construct **one** of the style details from your design. [8]

pleats.

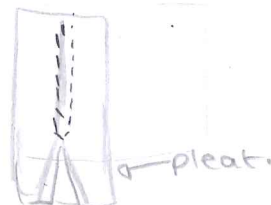
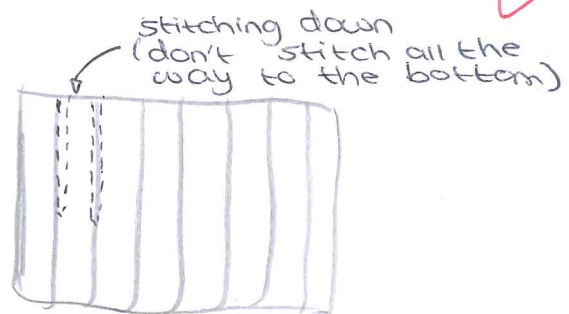
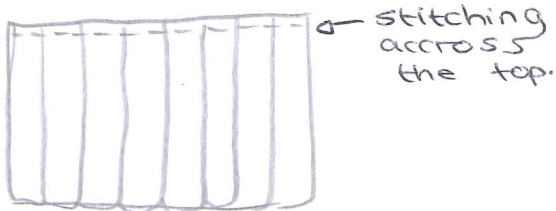
- ① Firstly measure the length of each pleat as preferred, using a ruler and pin in place. Do this by folding over the fabric.

e.g.



(tack in place)

- ② ~~Once~~ Once all pinned in place, either stitch across the top of the pleats or down the pleats.



- (e) Issey Miyake's 'Pleats Please' collection is made from 100% polyester. Outfits from the collection are shown below.



Analyse the use of polyester as a suitable material for creating the pleats and making the collection easy to care for. [8]

Polyester is a synthetic material and is thermoplastic. It's suitable for creating pleats because under heat and cooling down it will retain the pleats shape. It's flexible and resists abrasion which also makes it suitable. It makes the collection easy to care for because it can be machine washed. Polyester is fairly cheap to buy, it dyes well so can retain bright colours.

END OF PAPER

36 37

SUMMARY

- Candidates should be advised to read the question carefully in order to ensure that all elements are understood and are also included in their response.
- There were a number of instances where the responses throughout were not detailed enough to gain the higher level of marks.
- Well-planned and structured responses score well. These responses contain clear, and specific details relating to the question. They also show accuracy in terms of spelling, punctuation and grammar. An increasing number of candidates require more structure and planning in order to organize information clearly and coherently.
- In question 5 responses varied considerably; responses generally require more structure and planning, whilst ensuring that ALL elements of the question are covered..
- Centres should continue to advise candidates to use the mark allocation indicated at the end of each question to guide the depth of response required and manage time effectively.
- Centres should also be advised to remind candidates that answers could be amplified with detailed labelled sketches and/or diagrams where appropriate; many of the answers were unfortunately brief with a few words and simple sketches not allowing the candidate to fully explain the response. Quality of the sketches needs to be worked on by some centres.



GCE AS MARKING SCHEME

SUMMER 2018

**AS (NEW)
DESIGN AND TECHNOLOGY - UNIT 1
FASHION AND TEXTILES
2602U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2018 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

WJEC GCE AS DESIGN AND TECHNOLOGY

UNIT 1 FASHION AND TEXTILES

MARK SCHEME SUMMER 2018

| | Question 1 | | | |
|-----|--|-----|-----|------|
| | Advances in computer aided design and computer aided manufacturing (CAD/CAM) such as 3D printing, have enabled many designers to create visual effects with their designs that otherwise could not have been realised. The textile products showed below have been modelled using a 3D printer. | AO3 | AO4 | Mark |
| (a) | Explain one benefit of using a 3D printer to model ideas when making products like the ones shown. | | / | 2 |
| | <p>Answers that demonstrate an understanding of 3D printing as a modelling technique should be awarded up to 2 marks based on:</p> <p>3D printing/modelling allows ideas to develop faster, able to 3D print/model a concept the same day that it was designed and so shrinks the development process so that an idea/concept can be realised; can be personalised, tweaked to uniquely fit customer needs/wants; printing a prototype builds confidence before making a large investment so that the designer can trial and test a product in trade shows etc. before manufacturing on mass; more affordable than traditional ways of prototyping such as injection moulding, allowing the designer to experiment. Recycled plastics can be used to 3D print.</p> <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer</p> <p>1 mark A basic response for example: One benefit of using a 3D printer/model is that it is quicker to visualise the final outcome.</p> <p>2 marks A developed response for example: 3D printing/modelling allows the designer to be experimental and creative with their ideas. Allowing the designer to realise designs which would not have been possible before.</p> | | | |

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|-----|--|--|---|---|
| (b) | 3D images can be generated on screen, using CAD/ICT. Describe one advantage of modelling ideas in this way. | | / | 2 |
| | <p>Answers that demonstrate an understanding of the advantages of generating 3D images on screen should be awarded up to 2 marks based on:</p> <p>3D modelling allows you to visualise prototypes and make changes; there would be a reduction in costs as no product is made or materials bought; colour schemes, textures, prints etc. can be visualised, adapted easily and how materials might react in a 3D form; complex images can be saved easily and retrieved easily for future changes; two designers could look at the same image at the same time and recommend changes.</p> <p>Accept any other appropriate responses. No marks to be awarded for unqualified assertions, e.g. quicker, faster, easier etc.</p> <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer</p> <p>1 mark A basic response for example: 3D modelling allows you to visualise a prototype.</p> <p>2 marks A developed response for example: 3D modelling allows you to visualise a prototype and try out various colour ways, patterns and textures.</p> | | | |

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|-----|---|--|---|---|
| (c) | <p>Manufacturers regularly use laser cutters to support the manufacturing of Textile products like the one shown below.</p> <p>Discuss the advantages and disadvantages of using a laser cutter to the manufacturer.</p> | | / | 4 |
| | <p>Answers that demonstrate an understanding of the advantages and disadvantages of laser cutters to manufacturers should be awarded up to 4 marks based on:</p> <p>Advantages which include: It enables the manufacturer to produce intricate and detailed designs on garment pieces and textile products which cannot be done by hand, this offers more scope for design; materials can be engraved, a process not really possible before laser cutters; materials cut on the laser cutter do not fray, so edges do not necessarily need to be neatened; component parts such as buttons or bag handles can be engraved/cut to match designs on other parts of the product much more easily; extremely accurate and easily achieved in less time compared to traditional cutting methods, increasing productivity.</p> <p>Disadvantages which include: Not all fabrics can be laser cut/engraved, synthetic fabrics respond very well, for natural fabrics such as wool and linen, a brownish discoloured cutting edge is obtained; not all materials are suitable for use with the laser cutter as some materials such as PVC can burn or melt under the laser's beam; limited on the size of the piece of fabric to be cut/engraved depending on the size of the machine; usually, laser cutters have high energy consumption which in turn can be expensive when compared to other techniques of cutting material; gasses released during the process of cutting can be harmful and toxic, a well ventilated room is required which can also be expensive to set up. No marks to be awarded for unqualified assertions, e.g. quicker, faster, easier etc.</p> <p>Guidance to markers</p> <p>The candidate will need to discuss both advantages and disadvantages for full marks.</p> <p>0 marks No answer or an incorrect answer</p> <p>1mark A basic response for example: laser cutters offer more opportunities to cut designs out of materials or engrave them, this was not possible before.</p> <p>2 marks Some understanding with slightly more detail, a basic understanding of the advantages and disadvantages of using a laser cutter.</p> <p>3 marks A more developed response for example which address the advantages and disadvantages of the laser cutter to the manufacturer.</p> <p>4 marks A full and detailed response: a detailed and full understanding of the advantages and disadvantages to the manufacturer.</p> | | | |

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|-----|--|------------|------------|-------------|
| | Question 2 | | | |
| | Designers use anthropometric and ergonomic data to ensure that a product is comfortable and safe for use. | AO3 | AO4 | Mark |
| (a) | Explain how anthropometric data is used when designing a textile product. | | / | 2 |
| | <p>Answers that demonstrate an understanding of how anthropometric data is used should be awarded up to 2 marks based on:</p> <p>Anthropometric data consists of an analysis of human body measurements that have been taken from a wide range of people of all different ages and sizes. The data is used by the clothing/textile industry to draft out a range of pattern blocks in various sizes.</p> <p>Accept any other appropriate responses.</p> <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer</p> <p>1 mark A basic response with limited understanding of how anthropometric data is used. For example, it is using body measurements to design textile products.</p> <p>2 marks A developed response with good understanding of how anthropometric data is used when designing. For example, a wide range of body measurements are used to design and create pattern templates to design textile products.</p> | | | |

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|-----|--|--|---|---|
| (b) | Describe in detail the importance of ergonomics when designing a baby carrier like the one pictured below. | | / | 6 |
| | <p>Answers that demonstrate an understanding of ergonomic data when designing should be awarded up to 6 marks based on:</p> <p>Ergonomics is the relationship between humans and the products which they use. In this case, there are two humans to consider, the baby and the adult. The baby must be correctly supported and positioned making sure the baby's spine; pelvis and hips are well supported. The baby carrier also needs to be comfortable for both the adult and the baby and must be suitable for a range of baby sizes by the adjustment of the width of the seat to support the size of the baby, from birth onwards.</p> <p>The next main consideration is how well the carrier distributes the weight of the baby on the wearer. The baby carrier should hold the baby close to the body so that the baby does not lean away. The baby carrier also has a thick padded waist strap and padded shoulder straps with a chest buckle that helps to disperse the carrying weight of the baby appropriately on the wearer.</p> <p>Accept any other appropriate responses.</p> <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer.</p> <p>1-2 marks Brief description of a relevant ergonomic consideration made by the designer but little or no detail in the explanation of why.</p> <p>3-4 marks More detailed description of two relevant ergonomic consideration made by the designer when designing the baby carrier with simple reasoning.</p> <p>5-6 marks Clear and detailed description of three separate ergonomic consideration made by the designer when designing the baby carrier together with detailed reasoning for each consideration.</p> | | | |

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|-----|---|------------|------------|-------------|
| | Question 3 | | | |
| | The designer sheer top shown below is made from silk organza. French seams have been used in the construction of the top. | AO3 | AO4 | Mark |
| (a) | Explain why a French seam would be the most suitable seam to use for the top. | | / | 2 |
| | <p>Answers that demonstrate an understanding of why a French seam would be best to use on sheer fabric should be awarded up to 2 marks based on:</p> <p>Silk organza is an expensive, sheer, delicate fabric which will fray easily when handled.</p> <p>Enclosed French seams, narrow hems and bound edges work best with sheer fabrics, as unfinished seam allowances and heavy hems detract from the delicate, see-through look. A French seam hides raw edges completely; it keeps all the fraying enclosed and is often used in more expensive products. The French seam is one of the more complicated and time consuming seams which is reflected in the price of the garment.</p> <p>Accept any other appropriate response.</p> <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer</p> <p>1 mark A basic response with limited understanding of a French seam. For example, French seams are normally associated with high quality garments.</p> <p>2 marks A developed response with good understanding of the French seam and why this seam would be used. For example, a French seam hides raw edges completely; it keeps all the fraying enclosed and is often used in more expensive products.</p> | | | |

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|-----|--|--|---|---|
| (b) | The designer top above retails at £80. Discuss the ways in which the designer could reduce the overall cost of the top. | | / | 6 |
| | <p>Answers that demonstrate an understanding of how the designer could reduce the cost of the top by looking should be awarded up to 6 marks based on:</p> <p>The top shown is made from silk organza which is expensive and difficult to handle. High end construction techniques have been used to make the garment. The designer can look at alternative fabrics which will mimic the look of silk organza and will be easier to handle. Alternative/simpler construction techniques can be used and modifications to the top can be made to reduce the overall cost.</p> <p>Alternative fabrics: Organza is a thin, lightweight, plain weave, sheer fabric traditionally made from silk. Many modern organzas are woven with synthetic filament fibres such as polyester or nylon which is a cost effective alternative.</p> <p>Simpler construction techniques: The French seam that has been used is fiddly and time consuming. A plain open seam or closed over locked seam would be quicker and more cost effective. The seam will need to be finished as this fabric is sheer and frays badly. Do not accept a bias bound seam as this will not reduce the cost. The bottom on the top and bottom of the sleeves could be over locked and hemmed rather than bound, this would reduce the cost.</p> <p>Modifications to the design: The neckline could be enlarged slightly so that there is no need for a button fastening at the back; sleeves could be taken off the top leaving the top sleeveless and therefore using less material; the frill could be taken off the sleeves completely or reduced to one layer of frill instead of the two; the frill going across the top could be limited to the front only.</p> <p>Accept any other appropriate responses.</p> <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer</p> <p>1-2 marks Basic suggestions of how the designer could reduce the overall cost of the top.</p> <p>3-4 marks A few suggestions on how the cost of the top could be reduced.</p> <p>5-6 marks Clear and relevant suggestions on how the designer could reduce the overall cost of the top. To receive the 5-6 marks, candidates should discuss specifics such as named seams and/or named materials.</p> | | | |

| Question 4 | | | | |
|------------|--|-----|-----|------|
| | Non-woven bonded fabrics like the one shown below are widely used in the home, healthcare and in industry. | AO3 | AO4 | Mark |
| (a) | Evaluate the use of non-woven bonded fabrics in disposable products in a wide range of situations. | / | | 8 |
| | <p>Answers that demonstrate an understanding of how non-woven bonded fabrics can be used in a wide range of situations should be awarded up to 8 marks based on:</p> <p>Bonded fabrics are made from webs of synthetic fibres bonded together with heat or adhesives. They are cheap to produce but not as strong as woven or knitted fabrics. They are easy to sew, crease resistant, do not fray and are stable when washing and dry cleaning.</p> <p>A certain percentage of recycled fabrics and oil-based materials are used in nonwoven fabrics. The percentage of recycled fabrics vary based upon the strength of material needed for the specific use. For this reason, some consider nonwovens a more ecological fabric for certain applications, especially in fields and industries where disposable or single use products are important, such as hospitals, schools, nursing homes and luxury accommodations. Not all non-woven banded products are recyclable or biodegradable. It depends on the fibre content.</p> <p>Nonwoven fabrics provide specific functions such as absorbency, liquid repellence, resilience, stretch, softness, strength, flame retardancy, washability, cushioning, thermal insulation, acoustic insulation, filtration, use as a bacterial barrier and sterility. These properties are often combined to create fabrics suited for specific jobs, while achieving a good balance between product use-life and cost. They can mimic the appearance, texture and strength of a woven fabric and can be as bulky as the thickest paddings. In combination with other materials they provide a spectrum of products with diverse properties, and are used alone or as components of apparel, home furnishings, health care, engineering, industrial and consumer goods.</p> <p>Example: Medical</p> <p>Non-woven fabrics play a vital role in the medical sector. From surgical gowns, masks and other wearable products to surgical drapes, pads, dressings and filtration materials.</p> <p>Most medical non-woven products are disposable, single use items that have the advantage of sterilisation or cleaning for reuse. Some can also provide the required function over a limited period of time.</p> <p>With the latest medical technologies, doctors and state-of-art hospitals are now using non-woven fabrics as standard, which are not only economical and eco-friendly but disposable and fresh to use.</p> | | | |

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|--|---|--|--|--|
| | <p>Features and benefits:</p> <ul style="list-style-type: none"> - Reduction of risk from microbes that cause disease - Soft on skin - Disposable - Easy manoeuvrability - Air permeability - Can be sanitised - Easy to stitch <p>Product examples:</p> <ul style="list-style-type: none"> • Isolation gowns • Surgical gowns • Surgical drapes and covers • Surgical scrub suits • Caps • Medical packaging <p>Guidance to markers</p> <p>0 marks Little or no understanding.</p> <p>1-2 marks Basic appraisal and/or judgements of the use of non-woven bonded fabrics in disposable products.</p> <p>3-4 marks Satisfactory appraisal and/or judgements of the use of non-woven bonded fabrics in disposable products.</p> <p>5-6 marks Good appraisal and/or judgements of the use of non-woven bonded fabrics in disposable products in a wide range of situations. Must give examples with reasoning for full marks.</p> <p>7-8 marks Very good appraisal and/or judgements of the use of non-woven bonded fabrics in disposable products in a wide range of situations. Must give examples with detailed reasoning for full marks.</p> | | | |
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|--|---|------------|------------|-------------|
| | Question 5 | | | |
| | The denim jean is one of the most iconic fashion pieces in history. In the last few years designers have been focused on producing fashionable jeans which are also friendly to the environment. | AO3 | AO4 | Mark |
| | Describe the ethical and sustainable factors that designers and manufacturers should consider when producing a new pair of jeans. | | / | 8 |
| | <p>Answers that demonstrate an understanding of ethical and sustainable factors that should be considered by the designer should be awarded up to 8 marks based on:</p> <p>Guidance to markers</p> <p>It is important that the designer considers where and how the product is made. The consumer wants low cost and good quality products and it is the designer's responsibility to ensure that they minimise environmental impact, guarantee living wages and keep prices low.</p> <p>Ethical Fashion design covers a range of issues such as working conditions, exploitation, fair trade, the environment, and animal welfare. Sustainable design is the intention to reduce or completely eliminate negative environmental impacts through thoughtful designs.</p> <ul style="list-style-type: none"> Concerns are often raised about exploitative working conditions in the factories that make cheap clothes for the high street. Child workers, alongside exploited adults, can be subjected to violence and abuse such as forced overtime, as well as cramped and unhygienic surroundings, bad food, and very poor pay. The low cost of clothes on the high street means that less and less money goes to the people who actually make them. Cotton provides much of the world's fabric, but growing it uses insecticides and pesticides, chemicals which can be dangerous for the environment and harmful to the farmers who grow it. Current textile growing practices are considered unsustainable because of the damage largely due to the vast quantity of water required for cotton production and dying. Most textiles are treated with chemicals to soften and dye them; however these chemicals can be toxic to the environment and can be transferred to the skin of the people wearing them. During the sandblasting process to give a 'worn out look' to denim workers are at the risk of tuberculosis or silicosis. The low costs and disposable nature of high street fashion means that much of it is destined for incinerators or landfill sites. Many denim companies today are striving hard to embrace greener methods and are also making effort to develop new techniques of producing jeans, as a part of ethical/business strategies to protect the environment. The denim designers must have a clear understanding of the practices carried out by the suppliers. Although, the supply chain is spread in different countries but, when they compromise on their ethical and environmental standards, the brand reputation is damaged. | | | |

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| | <ul style="list-style-type: none"> Currently, cotton prices are all time high and there is a rising demand from the customers for jeans. In this tricky situation, manufacturers also need to adhere to the concept of sustainability. Sustainable jeans is not a concept that has been introduced in developed nations only, but also in developing countries like India and China. Indian designers have come up with eco- friendly denims for their customers. Instead of chemical dyes, vegetable dyes are utilized to get the authentic indigo shade of denim. <p>0 marks No answer or incorrect, no evidence of understanding.</p> <p>Level 1 1-2 marks</p> <ul style="list-style-type: none"> Candidate has a simplistic knowledge of the issues associated with the question. Limited use of terminology and technical language. The candidate has limited knowledge in relation to ethical and sustainable factors. The candidate will express basic ideas clearly, if not always fluently. Answers may deviate from the question or not be relevant. Grammar, punctuation and spelling may be weak impacting on effective communication. <p>Level 2 3-4 marks</p> <ul style="list-style-type: none"> The candidate has a basic understanding of the issues associated with the question. Satisfactory use of terminology and technical language. The candidate has some general knowledge of the ethical and sustainable factors. The candidate will express straightforward ideas clearly, if not always fluently. Answers may deviate from the question or be weakly presented. There may be some errors of grammar, punctuation and spelling but is still able to communicate the issues. <p>Level 3 5-6 marks</p> <ul style="list-style-type: none"> The candidate demonstrates a clear understanding of the issues associated with the question. Good use of terminology and technical language. The candidate has demonstrated knowledge of the ethical and sustainable factors. The candidate will express moderately complex ideas clearly and fluently, through well linked sentences and paragraphs. Answers will be generally relevant and structured. There may be occasional errors of grammar, punctuation and spelling. | | | |
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| | Level 4 7-8 marks <ul style="list-style-type: none"> • The candidate demonstrates a specific ability to analyse the question, takes into account a wide range of factors and has a clear understanding of the associated issues. • Very good use of terminology and technical language. • The candidate has developed a detailed knowledge of the ethical and sustainable factors. • The candidate will express complex ideas extremely fluently. Sentences and paragraphs will follow on from each other smoothly and logically. Answers will be consistently relevant and structured. • There will be few, if any, errors of grammar, punctuation and spelling. | | | |
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| Question 6. Design brief | | | | |
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| | <p>Issey Miyake is a very successful fashion designer who is known for his technology- driven clothing and products.</p> <p>A bag from the Bao Bao Autumn Winter 2017 collection is pictured below. Angular lines inspired by architecture, origami and vivid colours typify this collection.</p> <p>Design a wearable outfit for a young man or woman based on the Issey Miyake Bao Bao collection for an occasion of your choice.</p> | AO3 | AO4 | Mark |
| (a) | Write a detailed and justified four point specification based on the brief that you have been given. | / | | 8 |
| | <ul style="list-style-type: none"> The outfit must be suitable for a young man or woman to wear for the named occasion. Must be a wearable outfit / Issey Miyakes clothes are wearable and practical The outfit must be inspired by Issey Miyakes 'Bao Bao' collection /which is inspired by architecture, angular lines and origami The outfit must be creative and original / as Issey Miyakes is known for his technology-driven clothing and products The colours within the outfit must be colourful and vivid/ as this reflects the Bao Bao collection The outfit could be moveable/ as the Bao Bao bag is made up of triangles which can collapse on itself to form another shape <p>Guidance to markers</p> <p>0 marks No answer or an incorrect answer</p> <p>1 mark for each relevant specification point and 1 mark for its justification. No marks will be awarded for one word answers. (Accept any relevant specification point that is not listed above).</p> | | | |

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| (b) | Sketch your outfit in the space provided below. | | / | 8 |
| | <p>Candidates need to generate an outfit based on the design brief: Design a wearable outfit for a young man or woman based on the Issey Miyake Bao Bao collection for an occasion of your choice.</p> <p>Guidance to markers</p> <p>An outfit which reflects the Bao Bao collection [2] One mark for the reflection of Bao Bao and one mark for the suitable occasion.</p> <p>The creativity and originality of the idea [2] For the full two marks the idea must be related to the architectural aspect of his work.</p> <p>Quality of communication [2] A well-presented drawing (1) which communicates the design idea effectively (1).</p> <p>Labelling a minimum of two suitable materials [2] To achieve the full two marks, the materials need to be suitable for the outfit.</p> | | | |
| (c) | Using notes and sketches produce a manufacturing specification drawing for your outfit in the space below. | | / | 8 |
| | <p>The manufacturing specification drawing must be for the outfit which they have previously designed. A clear drawing of the front and back of the outfit is needed.</p> <p>Guidance to markers</p> <p>A technical/line drawing of the front and back of the outfit [4]</p> <p>Simple line drawing of the front or back view – 1 mark Front and back view shown in simplistic way – 2 marks Front and back view drawn to a good quality and includes some detail – 3 marks A detailed, well presented front and back view – 4 marks</p> <p>Labelling of construction and style details [4]</p> <p>Award one mark per appropriate/correct construction and/or style detail.</p> <p>Style details could include: batwing sleeve, lantern sleeve, roll-up cuff, band cuff, kangaroo pocket, patch pocket, A-line dress, wedge dress, Chinese jacket, bell boy jacket, lapel on a collar, swallow-tailed collar.</p> <p>Construction details could include: pin tucks, single pointed dart, flat-fell seam, faced hem, overlocked and folded hem, invisible zip, lapped zip, eyelets, press studs, yoke, and interfaced collar.</p> <p>The candidate could label 4 style details or 4 construction details. They could also label a mixture of both construction and style details. Please mark accordingly. Style details need to be correctly drawn.</p> | | | |

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| (d) | Using notes and diagrams explain in detail how you would construct one of the style details from your design. | | / | 8 |
| | <p>Using notes and sketches, candidates will need to explain in detail how they would construct one of the style details from their design. The candidate may not have labelled the style detail in Q6(c) and should not be penalised for this but the style detail should be taken from their design.</p> <p>Refer to typical style details listed in (c). Accept other suitable style details.</p> <p>Guidance to markers</p> <p>0 marks No answer or incorrect, no evidence of understanding.</p> <p>1-2 marks A simple response: Limited explanation of how they would construct a style detail, only one simplistic sketch.</p> <p>3-4 marks A reasonable understanding: An explanation of how they would construct a style detail along with simplistic sketches.</p> <p>5-6 marks A good understanding: A good explanation of how they would construct a named style detail along with clear and detailed diagrams.</p> <p>7-8 marks A clear understanding: A detailed explanation of how they would construct a named style detail along with clear and detailed diagrams</p> <p>Candidates should not be awarded over 4 marks if they have not included both notes and sketches. Decorative techniques are not style details and should not be credited with full marks. Award up to 6 marks maximum.</p> | | | |

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| (e) | <p>Issey Miyakes 'pleats please' collection is made from 100% polyester. Outfits from the collection is shown below.</p> <p>Analyse the use of polyester as a suitable material for creating the pleats and making the collection easy to care for.</p> | | / | 8 |
| | <p>The candidate must demonstrate their knowledge of 100% polyester and state the process used to pleat the fabric. They must also be able to explain why the finish can be applied to polyester and the benefits to the customer.</p> <p>Properties of 100% polyester:</p> <ul style="list-style-type: none"> • Polyester fabrics and fibers are extremely strong. • Polyester is very durable: resistant to most chemicals, stretching and shrinking, wrinkle resistant, mildew and abrasion resistant. • Polyester is hydrophobic in nature and quick drying. It can be used for insulation by manufacturing hollow fibers. • Polyester retains its shape and hence is good for making outdoor clothing for harsh climates. • It is easily washed and dried. • Polyester clothing can be machine washed and dried. • Though polyester does not require much ironing, if you must, then iron warm. • Polyester can be dry-cleaned with no hassles. <p>Fabric finish:</p> <p>Finishing a product/fabric improves the appearance, properties and quality of a product. It covers many different processes, some mechanical and some chemical.</p> <p>One mechanical finishing process, Heat setting, uses heat, pressure and rollers to improve the appearance of the fabric.</p> <p>Heat-setting is used for thermoplastic fabrics (polyester and nylon). The fabrics are set in permanent shapes or pleats.</p> <ul style="list-style-type: none"> • The fabric needs to be a thermoplastic to be heat set. • Thermoplastics can be reheated multiple times and shaped. • With heat the fabric soften (it does not not melt) • This allows them to be creased or set when soft • The creases are retained when it cools • Not a permanent finish as pleats can drop when washed, dried and ironed on a high heat. • Dry cleaning would ensure that the pleats stayed in over a period of time. | | | |

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| | <p>Guidance to markers</p> <p>0 marks No answer or incorrect, no evidence of understanding.</p> <p>3-4 marks The candidate has a simplistic knowledge of the properties of polyester and of a suitable fabric finish.</p> <p>5-6 marks The candidate shows that they have an understanding of polyester and why it would be the most suitable fabric for the pleating process.</p> <p>7-8 marks The candidate shows that they have clear knowledge of why polyester would be used in these garments along with knowledge of the finishing process, making the product affordable and easy to care for.</p> | | | |
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