

Mark Scheme (Results)

Summer 2007

GCSE

GCSE Design and Technology: Textiles Technology Higher Tier (1971/3971)

Marking Guidance

Give / State / Name

Normally a one or two word answer, at the very most a short sentence.

Describe

Normally, one or two sentences which form a description, making reference to more than one point. All points must be linked for a complete answer.

Explain

Normally, one or two sentences which form an explanation. This requires a clear or detailed account of something and includes a relevant justification, reason or example.

Evaluate

Normally one or two sentences where the quality, suitability or value of something is judged. This can include both positive and negative points, with each point normally requiring a relevant justification.

The mark scheme contains a range of possible answers for all questions. For some questions it is possible to provide a finite number of acceptable answers. However, in some instances it is not possible to provide every conceivable answer. In these instances objective guidance is provided.

For all answers candidates are not expected to give the exact wording contained in this mark scheme. However, to gain credit their answer must demonstrate the same meaning as detailed in the mark scheme.

It is the examiner's responsibility to apply their professional judgement in determining if what the candidate has written has the same meaning as the answer detailed in the mark scheme. For all answers the '*Key words*' have been written in bold text.

For describe and explain questions, candidates may give a different combination of the marking points listed in the mark scheme. In such instances candidates can be rewarded for the marking points provided that they are suitably linked. However, candidates cannot be rewarded for the same point repeated in two different combinations.

Examiners must mark in red pen using ticks and crosses in the body of the script.

Design & Technology: Textiles Technology (1971/2H)
Full Course Higher Tier Mark Scheme

Question Number	Question		
1971_2H_Q01a	<p>The drawing shows details of a dress and T-shirt to fit a 12 to 18 month-old child. The dress and T-shirt is produced for sale in supermarkets.</p> <p>Two specification points for the dress and T-shirt are that they must:</p> <ul style="list-style-type: none"> • be comfortable to wear • provide easy access for nappy changing or toileting <p>Under each of the following headings, give <u>one</u> more point that should be included in the specification for the dress and T-shirt.</p>		
	<p>Answer</p> <p>Three each of the following: Specification points Reasons <i>(Do not accept repetition of the specification points given)</i> <i>(Some flexibility should be given as some points may cross over description but must be only one relevant point for each heading)</i></p> <p><u>Market</u> Point: appealing to parents / target market Reason: item bought by parents so needs to appeal to their taste / suitable for age group</p> <p>Point classic design Reason: reduced obsolescence so can be handed down/recycled</p> <p>Point: loose fitting / (t shirt) stretches Reason: comfortable to wear / easy to move in /easy to put on</p>	<p>Part Mark</p> <p>3x1 3x1</p>	<p>Total Mark</p> <p>(6)</p>

Point: ease/convenience of purchase
Reason: available to purchase in supermarket with other shopping

Point: reasonable price
Reason: child will grow out of it quickly / parents' restricted budget

Environment

Point: fabrics mostly natural
Reason: natural fabrics can be recycled/are biodegradable

Point: washed easily
Reason: machine washable at 40 degrees so saves energy resources

Point: won't wear out quickly
Reason: can be passed down to other family members

Point: dyed with bio-degradable dyes
Reason: do not pollute

Quality

Point: well made eg stitching/embroidery/pockets/straps/fastenings secure/accurate / edges finished accurately/appropriately
Reason: item worn by children so must be firmly stitched/components attached securely

Point: durable/strong fabrics
Reason: fabric will get constant use so must withstand wear and tear

Point: components/buttons good quality
Reason: good quality buttons so do not scratch hurt/injure wearer

Question Number	Question	Part Mark	Total Mark
1971_2H_Q01bi	<p>The T-shirt is made from 9% cotton jersey and 4% elastane.</p> <p>One reason why the T-shirt is made from cotton jersey with elastane is that it can be assembled using an overlocker.</p> <p>Give <u>two</u> other reasons why cotton jersey with elastane is a suitable material for the T-shirt.</p>		
	<p>Answer</p> <p>Two reasons from:</p> <ul style="list-style-type: none"> • stretches/gives • fits body shape • regains/holds shape • easy to put on/take off • room to move / ease of movement • comfortable/soft to wear • easily washed • crease resistant <p><i>(Do not accept use of 'overlocker')</i></p>	2x1	(2)

Question Number	Question	Part Mark	Total Mark
1971_2H_Q01bii	Give <u>two</u> reasons why overlocking is a suitable process to manufacture the T-shirt.		
	<p>Answer</p> <p>Two reasons from the following:</p> <ul style="list-style-type: none"> • seam gives with the fabric • seams stitched, neatened and trimmed in one go • professional/quality finish • fast/efficient/easy process • seams are strong/durable/flat/don't fray/unlikely to split/come undone 	2x1	(2)
1971_2H_Q01c	<p>The dress is made from cotton denim fabric.</p> <p>Give <u>two</u> properties of cotton denim that make it suitable for the dress.</p> <p>For each property give <u>one</u> reason why it makes cotton denim suitable.</p>		
	<p>Answer</p> <p>Two properties with reasons from the following:</p> <p>Property: durable/hardwearing/strong/resist abrasion Reason: children active/crawl/play so need to withstand constant strain/wear and tear</p> <p>Property: easily washable / by machine Reason: can be washed at high/low temps so stains removed / constant washing required due to children dirtying clothes frequently</p> <p>Property: absorbent Reason: will absorb spills/moisture</p>	2x1 2x1	(4)

Question Number	Question		
1971_2H_Q01d	The buttons are silver coloured. Explain <u>one</u> reason why the buttons are silver coloured.		
	Answer	Part Mark	Total Mark
	One reason explained from the following: <ul style="list-style-type: none"> • highlights the buttons therefore a decoration/fashion feature • contrast/visible with fabric so making the design appealing/stand out to the consumer 	2x1	(2)
Question Number	Question		
1971_2H_Q01e	The embroidery on the dress is created using a CNC embroidery machine. Explain <u>one</u> reason why a CNC embroidery machine is used for creating the embroidery.		
	Answer	Part Mark	Total Mark
	One reason explained from the following: <ul style="list-style-type: none"> • programmed to automatically sew the design so quick/easy/cheap to produce • produced in large quantities to a consistent/accurate standard • patterns stored in memory so can be used again • wide range of decorative stitches / adjustable colour/size so garments can be different/individual/personalised • professional finish so garments high quality 	2x1	(2)

Question Number	Question	Part Mark	Total Mark
1971_2H_Q01f	<p>Two purposes of the dress and T-shirt are that they must:</p> <ul style="list-style-type: none"> • be comfortable to wear • provide easy access for nappy changing or toileting <p>(i) Explain, under the following headings, how the dress and T-shirt achieve these purposes.</p>		
	<p>Answer</p> <p>One example explained of how purpose is achieved:</p> <p>(i) Be comfortable to wear</p> <ul style="list-style-type: none"> • T shirt fabric is stretchy / dress is loose fitting so easy to move in • knitted/cotton/elastane t shirt fabric is soft/cool • good length for ease of crawling/walking <p>(ii) Provide easy access for nappy changing or toileting</p> <ul style="list-style-type: none"> • loose fitting/A-line/pleat dress so easy to lift up • straps/buttons/fastenings can be easily undone / no need to be undone 	<p>2x1</p> <p>2x1</p>	<p>(2)</p> <p>(2)</p>
			(Total 22 marks)

Question Number	Question																	
1971_2H_Q02a	Fabrics can be made by weaving fibres together in a variety of different ways. Name the non-fraying edge of woven fabrics.																	
	Answer		Part Mark	Total Mark														
	Selvedge (<i>only answer</i>)		1	(1)														
Question Number	Question																	
1971_2H_Q02b	Name <u>two</u> different weaves and give an example of a fabric that is made from each.																	
	Answer		Part Mark	Total Mark														
	<table border="1"> <thead> <tr> <th>Weave</th> <th>Fabric</th> </tr> </thead> <tbody> <tr> <td>Plain</td> <td>Percalé / voile / poplin / calico / gingham / organza / chiffon / linen / polyester cotton / muslin</td> </tr> <tr> <td>Twill</td> <td>Denim / gabardine</td> </tr> <tr> <td>Satin</td> <td>Silk / satin / sateen</td> </tr> <tr> <td>Herringbone</td> <td>Hessian / tweed</td> </tr> <tr> <td>Pile</td> <td>Velvet / corduroy / towelling / velour</td> </tr> <tr> <td>Jacquard</td> <td>Brocade / damask</td> </tr> </tbody> </table>		Weave	Fabric	Plain	Percalé / voile / poplin / calico / gingham / organza / chiffon / linen / polyester cotton / muslin	Twill	Denim / gabardine	Satin	Silk / satin / sateen	Herringbone	Hessian / tweed	Pile	Velvet / corduroy / towelling / velour	Jacquard	Brocade / damask	4x1	(4)
Weave	Fabric																	
Plain	Percalé / voile / poplin / calico / gingham / organza / chiffon / linen / polyester cotton / muslin																	
Twill	Denim / gabardine																	
Satin	Silk / satin / sateen																	
Herringbone	Hessian / tweed																	
Pile	Velvet / corduroy / towelling / velour																	
Jacquard	Brocade / damask																	

Question Number	Question		
1971_2H_Q02c	Woven fabrics are very suitable for making patchwork. State <u>two</u> important points to consider when choosing fabrics for patchwork.		
	Answer	Part Mark	Total Mark
	Two points from: <ul style="list-style-type: none"> • fabrics similar in weight / thickness • fabrics similar in care requirements/properties • fabrics must be able to be cut accurately • colours/design coordinated • nap/grain/patterns run the same way • choose fabrics that don't fray badly • choose fabrics that are firm / not stretchy 	2x1	(2)
Question Number	Question		
1971_2H_Q02d	Digital printers have improved the production of printed fabrics. Describe <u>two</u> ways in which digital printing is an improvement on conventional printing processes.		
	Answer	Part Mark	Total Mark
	Two improvements described: <ul style="list-style-type: none"> • unlimited colours (16 million) so more choice for consumers • extend product ranges due to flexibility of colourways • excellent quality due to greater accuracy • complex designs produced inexpensively • designs changed on screen and samples printed quickly so responsive to designer's needs • time saving/quicker (2 weeks instead of 6-12) as prints continuously/in large quantities 		

- environmentally friendly as no waste to dispose of
- can respond flexibly & quickly to changing demands of the market
- compete competitively using jit/just in time production
- cheaper because no need for screens and rollers / fewer workers needed / faster to produce

4x1

(4)

Question Number	Question	Part Mark	Total Mark
1971_2H_Q02ei	Textile products can be manufactured using one-off, batch or high volume production methods. Name <u>one type</u> of textile product that would be made using the one-off method.		
	Answer		
	One product type, made by one-off, named from the following: <ul style="list-style-type: none"> • bespoke products eg wedding dresses / ball gowns / hand knitted/embroidered garments / tailored suits to individual measurements • garments made to specific customer requirements eg adapted for disabilities / colour matched / personalised • designer wear eg fashion house prototypes 	1	(1)
Question Number	Question	Part Mark	Total Mark
1971_2H_Q02eii	Name <u>two</u> textile products that would be made using high volume production methods.		
	Answer		
	Two products named: <ul style="list-style-type: none"> • socks • tights • underpants/underwear / boxers / knickers / <i>(Only answers)</i>	2x1	(2)

Question Number	Question		
1971_2H_Q02f	<p>CAD is used in batch production for pattern making, grading and lay planning.</p> <p>Explain one advantage of using CAD in textiles production, for each of the following:</p> <p>(i) Modifying existing pattern pieces</p> <p>(ii) Grading pattern pieces for different sizes</p> <p>(iii) Lay planning to fit all the pattern pieces onto the fabric</p>		
	Answer	Part Mark	Total Mark
	<p>(i) One advantage of CAD in Modifying existing pattern pieces:</p> <ul style="list-style-type: none"> • quicker as don't have to start from scratch • data from previous patterns stored/saved therefore can be edited 	2x1	(2)
	<p>(ii) One advantage of CAD in Grading pattern pieces for different sizes</p> <ul style="list-style-type: none"> • quicker / fewer mistakes as CAD works out calculations • outline for new sizes can be accurate because scaled by system • alterations done on screen then transferred to cutting machine or lay plan 	2x1	(2)
	<p>(iii) One advantage of CAD in Lay planning to fit all the pattern pieces onto the fabric</p> <ul style="list-style-type: none"> • efficient use of material / best fit so less waste/more accuracy • efficient use of time/faster / saves money because easy to move pieces around on computer • less space needed as fabric not laid out until ready 	2x1	(2)

Question Number	Question	Part Mark	Total Mark
1971_2H_Q02g	<p>ICT is used in volume production to assist in ensuring high quality.</p> <p>Explain <u>one</u> way ICT can assist in ensuring that high quality textile products are manufactured.</p>		
	<p>Answer</p> <p>One way explained:</p> <ul style="list-style-type: none"> • allows stages of production to be monitored so errors are picked up/corrected quickly • set checks at certain points to ensure product meets the specification • reduces human error / improves accuracy which saves time / wasted materials • ensures consistency so all products meet the required standard 	2x1	(2)
			(Total 22 Marks)

Question Number	Question		
1971_2H_Q03a	<p>A company is designing a bag for carrying sports equipment. The specifications of the sports bag is that it must:</p> <ul style="list-style-type: none"> • be able to carry dirty trainers and sports clothes separately • open easily and close securely • have a sporting logo suitable for production with a CNC machine • be made using fabrics and processes suitable for batch production <p>In the spaces, use sketches, and where necessary, brief notes to show <u>two different</u> design ideas for the sports bag which meet this specification.</p>		
	<p>Answer</p> <p>Each point of the specification has two marking points.</p> <p>1 mark should be awarded for evidence of each point of the specification resolved in the design.</p> <p>Where an answer does not viably answer a specification point 0 marks For each specification point with only one element viably satisfied 1 mark For each specification point with both elements viably satisfied 2 marks</p> <p>Candidates may answer any specification point in either graphical form or by annotation.</p> <p>No marks are awarded for the quality of communication.</p> <p>Design Idea 1 Design responses Be able to carry dirty trainers and sports clothes separately</p> <ul style="list-style-type: none"> • evidence of being able to carry dirty trainers and sports clothes in different size 	Part Mark	Total Mark
		1	

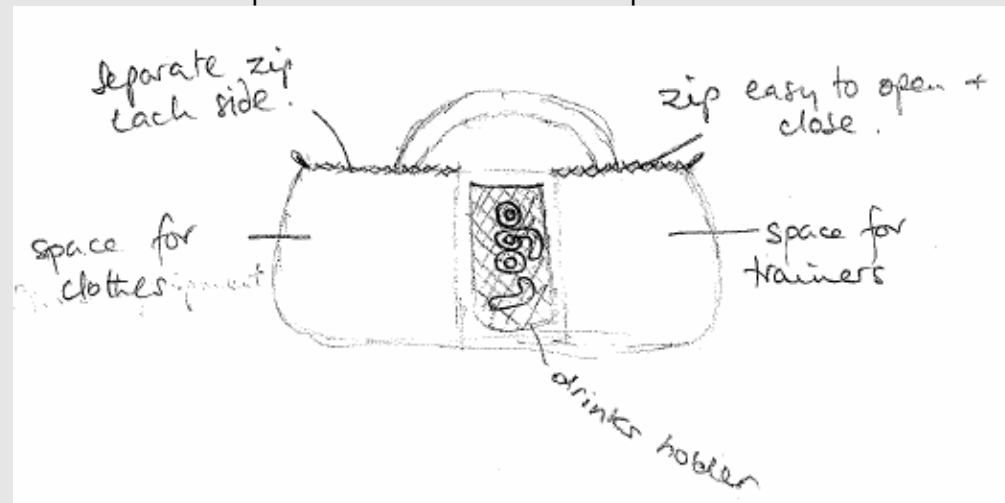
- pockets/holders eg use of waterproof materials to separate items / zipped pockets/separate compartments inside/outside bag
- evidence of being able to hold items separately 1
- eg use of waterproof materials to separate items / zipped pockets / compartments etc

- Open easily and close securely**
- evidence of opens easily 1
- eg use of zips, drawstring with toggle, straps, Velcro to open
- evidence of closes securely with appropriate fastening 1
- eg padlock, buttons etc

- Have a sporting logo suitable for production with a CNC machine**
- evidence of suitable logo 1
- evidence of suitable for production by CNC machine 1

- Be made using fabrics and processes suitable for batch production**
- evidence that fabric is suitable for batch production 1
- evidence that process is suitable for batch production 1

(8)



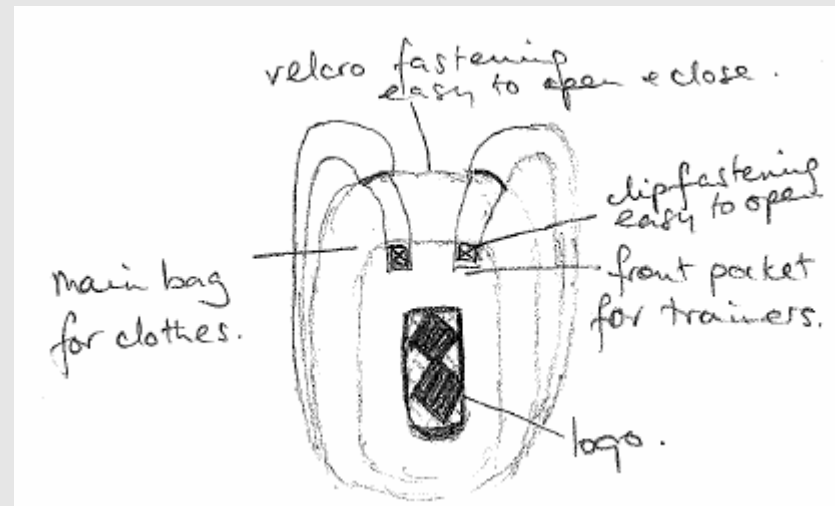
Design Idea 2

To score a mark for Design Idea 2, each specification point must be resolved again in the second design idea but the second design idea **must be technically/conceptually different in design and construction** from the first and not a simple variation on a theme to score the mark.

Use exactly the same criteria as design idea 1 to mark design idea 2.

A different method of carrying dirty trainers	1
A different method of carrying sports clothes separately	1
A different method of opening easily	1
A different method of closing securely	1
A different sporting logo	1
Suitable for production by CNC machine	1
A different fabric suitable for batch production	1
A different process suitable for batch production	1

(8)



Question Number	Question		
1971_2H_Q03b	<p>Three of the original specification points are repeated below.</p> <p>Evaluate how <u>one</u> of your design ideas succeeds or fails to meet each of the specification points.</p> <p>(i) Be able to carry dirty trainers and sports clothes separately (ii) Have a sporting logo suitable for production with a CNC machine (iii) Be made using fabrics and processes suitable for batch production</p>		
1971_2H_Q03bi	<p>Answer</p> <p>Each point clearly evaluated.</p> <p>If a candidate has indicated design idea 1 and then evaluates design idea 2 for all or part of (i), (ii) & (iii) then the idea in greater evidence should be marked.</p> <p>The evaluation of the design must contain reference to either positive or negative aspects not just simply a description of the design.</p> <p>Award 1 mark for a correct evaluation/justification relating to each design feature and how it succeeds or fails.</p> <p>Repetition of original spec scores 0.</p> <p>(i) Evaluation of: Be able to carry dirty trainers and sports clothes separately Comments (positive or negative)on: Able to carry dirty trainers</p> <ul style="list-style-type: none"> • different sized pockets/holders • placement of pockets inside or outside of bag <p>Sports clothes separately</p> <ul style="list-style-type: none"> • use of fastenings to keep separate • use of different fabrics to keep separate 	Part Mark	Total Mark
		2x1	(2)

(ii)	<p>Evaluation of: Have a sporting logo suitable for production with a CNC machine</p> <p>Comments (positive or negative)on: Have a sporting logo</p> <ul style="list-style-type: none"> • type of suitable logo chosen • suitable for production with a CNC machine • suitability for CNC of logo chosen 	2x1	(2)
(iii)	<p>Evaluation of: Be made using fabrics and processes suitable for batch production</p> <p>Comments (positive or negative) on: Made using fabrics suitable for batch production.</p> <ul style="list-style-type: none"> • fabrics which make it suitable for batch production <p>Made using processes suitable for batch production.</p> <ul style="list-style-type: none"> • shape, features, fastenings which make it more suitable for batch production 	2x1	(2)

(Total 22 Marks)

Question Number	Question		
1971_2H_Q04ai	<p>Silk is a relatively expensive natural filament fibre.</p> <p>Give <u>two</u> properties of silk that make it suitable for evening wear.</p>		
	<p>Answer</p> <p>Two properties given:</p> <ul style="list-style-type: none"> • dyes well • lustrous • smooth / soft • drapes well • strong • absorbent • warm • resilient / handles well • lightweight 	<p>Part Mark</p> <p>2x1</p>	<p>Total Mark</p> <p>(2)</p>

Question Number	Question	Part Mark	Total Mark
1971_2H_Q04a	<p>Filament fibres can also be manufactured.</p> <p>Describe <u>one</u> characteristic of filament fibres.</p>		
	<p>Answer</p> <p>One way described:</p> <ul style="list-style-type: none"> • long continuous/length fibres which make them appear smooth / shiny / straight / flat • manufactured filament yarns are stretched/drawn which makes them strong 	2x1	(2)
1971_2H_Q04b	<p>Natural fibres are sometimes blended to make yarns.</p> <p>Give <u>one</u> reason for making blended yarns.</p>		
	<p>Answer</p> <p>One reason for making blended yarns given from:</p> <ul style="list-style-type: none"> • combine/add performance properties • more economical/cheaper to buy • add decoration/texture/colour 	1	(1)

Question Number	Question
1971_2H_Q04c	Durability is a property of some fabrics. Use sketches and notes to show how a durability test would be carried out in school.

Answer	Part Mark	Total Mark
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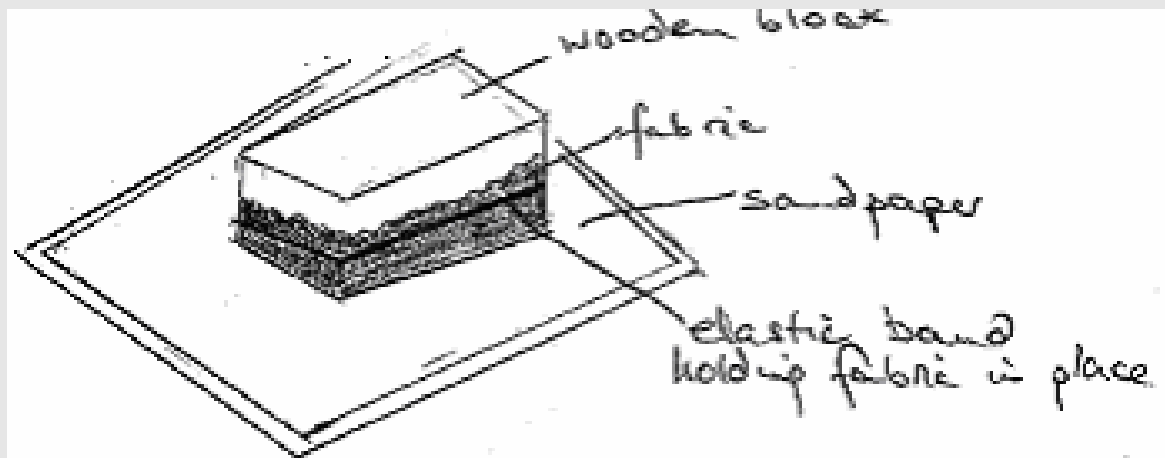
Any four stages from:

Durability test instructions - award marks for diagrams & notes.

- sandpaper block
- fabric wrapped around a wooden block or stretched over a jar
- rubbed on piece of sandpaper
- fair test / count number of rubs / same pressure used / control fabric
- results record / amount of wear / holes / pilling

(4x1)

(4)



Question Number	Question	Part Mark	Total Mark
1971_2H_Q04d	<p>Kevlar is often used for firefighters' uniforms.</p> <p>Give <u>two</u> functional properties of Kevlar that make it suitable for firefighters' uniforms.</p>		
	<p>Answer</p> <p>Two properties of Kevlar given from:</p> <ul style="list-style-type: none"> • flame/fire resistant/proof / non-flammable • resistant to chemicals • durable/tough/hardwearing/strong • lightweight • resistant to piercing / sharp objects 	2x1	(2)
1971_2H_Q04e	<p>New technology has allowed us to develop smart fabrics that change colour in response to heat or light.</p> <p>Give <u>two</u> different uses for colour changing smart fabrics. For each use give <u>one</u> reason for colour change being an advantage.</p>		
	<p>Answer</p> <p>Two uses of colour changing fabrics given with reason:</p> <p>Use: combat uniforms Reason: blend in with surroundings</p> <p>Use: t-shirts / swimwear Reason: warn against exposure to UV light & sunburn.</p> <p>Use : disco/rave/club fashion wear Reason: illuminate in UV light</p>		

Use: safety wear
Reason: reflects light in the dark

Use: bandages
Reason: alert to the need to change/remove

2x1
2x1

(4)

Question Number	Question	Part Mark	Total Mark
1971_2H_Q04f	<p>Synthetic microfibres can be used to make sports clothing.</p> <p>Give <u>two</u> advantages and <u>one</u> disadvantage to the consumer of clothes made from synthetic microfibres.</p>		
	<p>Answer</p> <p>Two advantages to the consumer given:</p> <ul style="list-style-type: none"> • does not rot • resistant to staining by micro-organisms/perspiration • absorbs/draws sweat away from the body • allows ventilation / cooler to wear / breathable • can be made to include beneficial chemicals / micro-encapsulation <p>One disadvantage to the consumer given:</p> <ul style="list-style-type: none"> • does not rot/biodegrade in landfill sites/after use • uses non renewable sources • may be more expensive 	<p>2x1</p> <p>1x1</p>	<p>(3)</p>

Question Number	Question	Part Mark	Total Mark
1971_2H_Q04g	Textile production has an impact upon the environment. Describe <u>two</u> ways in which manufacturers can reduce the environmental impact of their textile production methods.		
	Answer		
	Two ways described:		
	<ul style="list-style-type: none"> • less packaging/re-using/recycling which reduces waste • efficient machinery / lighting off / use of alternative energy sources eg wind/water power which reduces energy / fossil fuel consumption • re-use water / dyeing using different technologies which reduces the amount of water needed • fit scrubbers to chimneys / clean before releasing into atmosphere / reduce transportation which reduces emissions • ensure dyes used are environmentally friendly so that they reduce waste / don't produce effluent 	2x1 2x1	(4)
			(Total 22 marks)
			TOTAL FOR PAPER: 88 MARKS

Design & Technology: Textiles Technology (3971/2H)
Short Course Higher Tier Mark Scheme

Question Number	Question	
3971_2H_Q01a	<p>The drawing shows details of a dress and T-shirt to fit a 12 to 18 month-old child. The dress and T-shirt is produced for sale in supermarkets.</p> <p>Two specification points for the dress and T-shirt are that they must</p> <ul style="list-style-type: none"> • be comfortable to wear • provide easy access for nappy changing or toileting <p>Under each of the following headings, give <u>one</u> more point that should be included in the specification for the dress and T-shirt.</p>	
	<p>Answer</p> <p>Three each of the following: Specification points Reasons <i>(Do not accept repetition of the specification points given)</i> <i>(Some flexibility should be given as some points may cross over description but must be only one relevant point for each heading)</i></p> <p><u>Market</u> Point: appealing to parents / target market Reason: item bought by parents so needs to appeal to their taste / suitable for age group</p> <p>Point classic design Reason: reduced obsolescence so can be handed down/recycled</p> <p>Point: loose fitting / (t shirt) stretches Reason: comfortable to wear / easy to move in /easy to put on</p>	<p>Part Mark</p> <p>3x1 3x1</p> <p>Total Mark</p> <p>(6)</p>

Point: ease/convenience of purchase

Reason: available to purchase in supermarket with other shopping

Point: reasonable price

Reason: child will grow out of it quickly / parents' restricted budget

Environment

Point: fabrics mostly natural

Reason: natural fabrics can be recycled/are biodegradable

Point: washed easily

Reason: machine washable at 40 degrees so saves energy resources

Point: won't wear out quickly

Reason: can be passed down to other family members

Point: dyed with bio-degradable dyes

Reason: do not pollute

Quality

Point: well made eg stitching/embroidery/pockets/straps/fastenings secure/accurate / edges finished accurately/appropriately

Reason: item worn by children so must be firmly stitched/components attached securely

Point: durable/strong fabrics

Reason: fabric will get constant use so must withstand wear and tear

Point: components/buttons good quality

Reason: good quality buttons so do not scratch hurt/injure wearer

Question Number	Question		
3971_2H_Q01bi	<p>The T-shirt is made from 9% cotton jersey and 4% elastane.</p> <p>One reason why the T-shirt is made from cotton jersey with elastane is that it can be assembled using an overlocker.</p> <p>Give <u>two</u> other reasons why cotton jersey with elastane is a suitable material for the T-shirt.</p>		
	Answer	Part Mark	Total Mark
	<p>Two reasons from:</p> <ul style="list-style-type: none"> • stretches/gives • fits body shape • regains/holds shape • easy to put on/take off • room to move / ease of movement • comfortable/soft to wear • easily washed • crease resistant <p><i>(Do not accept use of 'overlocker')</i></p>	2x1	(2)

Question Number	Question	Part Mark	Total Mark
3971_2H_Q01bii	Give <u>two</u> reasons why overlocking is a suitable process to manufacture the T-shirt.		
	<p>Answer</p> <p>Two reasons from the following:</p> <ul style="list-style-type: none"> • seam gives with the fabric • seams stitched, neatened and trimmed in one go • professional/quality finish • fast/efficient/easy process • seams are strong/durable/flat/don't fray/unlikely to split/come undone 	2x1	(2)
1971_2H_Q01c	<p>The dress is made from cotton denim fabric.</p> <p>Give <u>two</u> properties of cotton denim that make it suitable for the dress.</p> <p>For each property give <u>one</u> reason why it makes cotton denim suitable.</p>		
	<p>Answer</p> <p>Two properties with reasons from the following:</p> <p>Property: durable/hardwearing/strong/resist abrasion Reason: children active/crawl/play so need to withstand constant strain/wear and tear</p> <p>Property: easily washable / by machine Reason: can be washed at high/low temps so stains removed / constant washing required due to children dirtying clothes frequently</p> <p>Property: absorbent Reason: will absorb spills/moisture</p>	2x1 2x1	(4)

Question Number	Question		
3971_2H_Q01d	The buttons are silver coloured. Explain <u>one</u> reason why the buttons are silver coloured.		
	Answer	Part Mark	Total Mark
	One reason explained from the following: <ul style="list-style-type: none"> • highlights the buttons therefore a decoration/fashion feature • contrast/visible with fabric so making the design appealing/stand out to the consumer 	2x1	(2)
Question Number	Question		
3971_2H_Q01e	The embroidery on the dress is created using a CNC embroidery machine. Explain <u>one</u> reason why a CNC embroidery machine is used for creating the embroidery.		
	Answer	Part Mark	Total Mark
	One reason explained from the following: <ul style="list-style-type: none"> • programmed to automatically sew the design so quick/easy/cheap to produce • produced in large quantities to a consistent/accurate standard • patterns stored in memory so can be used again • wide range of decorative stitches / adjustable colour/size so garments can be different/individual/personalised • professional finish so garments high quality 	2x1	(2)

Question Number	Question		
3971_2H_Q01f	<p>Two purposes of the dress and T-shirt are that they must:</p> <ul style="list-style-type: none"> • be comfortable to wear • provide easy access for nappy changing or toileting <p>Explain, under the following headings, how the dress and T-shirt achieve these purposes.</p>		
	Answer	Part Mark	Total Mark
	<p>One example explained of how purpose is achieved:</p> <p>(i) Be comfortable to wear</p> <ul style="list-style-type: none"> • T shirt fabric is stretchy / dress is loose fitting so easy to move in • knitted/cotton/elastane t shirt fabric is soft/cool • good length for ease of crawling/walking <p>(ii) Provide easy access for nappy changing or toileting</p> <ul style="list-style-type: none"> • loose fitting/A-line/pleat dress so easy to lift up • straps/buttons/fastenings can be easily undone / no need to be undone 	2x1	(2)
		2x1	(2)
(Total 22 marks)			
Question Number	Question		
3971_2H_Q02a	<p>Fabrics can be made by weaving fibres together in a variety of different ways.</p> <p>Name the non-fraying edge of woven fabrics.</p>		
	Answer	Part Mark	Total Mark
	Selvedge (<i>only answer</i>)	1	(1)

Question Number	Question
3971_2H_Q02b	Name <u>two</u> different weaves and give an example of a fabric that is made from each.

Answer	Part Mark	Total Mark
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Weave	Fabric
Plain	Percale / voile / poplin / calico / gingham / organza / chiffon / linen / polyester cotton / muslin
Twill	Denim / gabardine
Satin	Silk / satin / sateen
Herringbone	Hessian / tweed
Pile	Velvet / corduroy / towelling / velour
Jacquard	Brocade / damask

4x1 (4)

Question Number	Question
3971_2H_Q02c	Woven fabrics are very suitable for making patchwork. State <u>two</u> important points to consider when choosing fabrics for patchwork.

Answer	Part Mark	Total Mark
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Two points from:

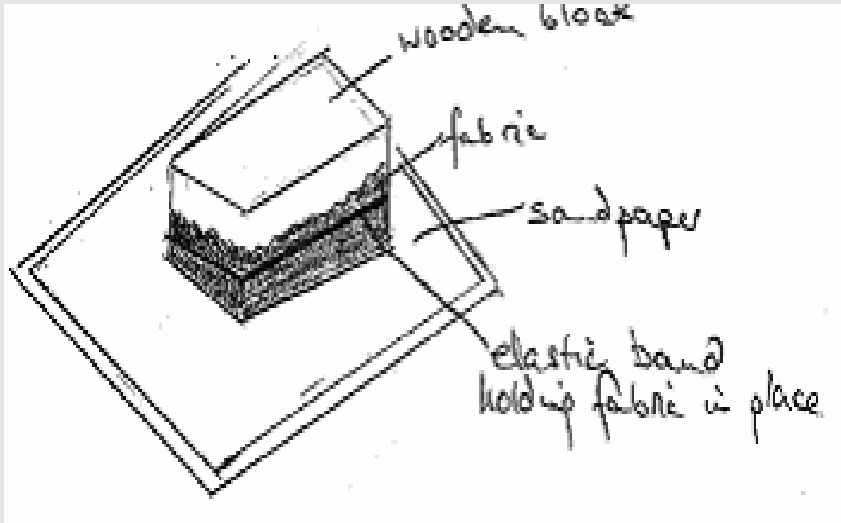
- fabrics similar in weight / thickness
- fabrics similar in care requirements/properties
- fabrics must be able to be cut accurately
- colours/design coordinated
- nap/grain/patterns run the same way
- choose fabrics that don't fray badly
- choose fabrics that are firm / not stretchy

2x1 (2)

Question Number	Question	Part Mark	Total Mark
3971_2H_Q02d	<p>Digital printers have improved the production of printed fabrics.</p> <p>Describe <u>two</u> ways in which digital printing is an improvement on conventional printing processes.</p>		
	<p>Answer</p> <p>Two improvements described:</p> <ul style="list-style-type: none"> • unlimited colours (16 million) so more choice for consumers • extend product ranges due to flexibility of colourways • excellent quality due to greater accuracy • complex designs produced inexpensively • designs changed on screen and samples printed quickly so responsive to designer's needs • time saving/quicker (2 weeks instead of 6-12) as prints continuously/in large quantities • environmentally friendly as no waste to dispose of • can respond flexibly & quickly to changing demands of the market • compete competitively using JIT/just in time production • cheaper because no need for screens and rollers / fewer workers needed / faster to produce 	4x1	(4)
		(Total 11 marks)	

Question Number	Question		
3971_2H_Q04ai	<p>Silk is a relatively expensive natural filament fibre.</p> <p>Give <u>two</u> properties of silk that make it suitable for evening wear.</p>		
	<p>Answer</p> <p>Two properties given:</p> <ul style="list-style-type: none"> • dyes well • lustrous • smooth / soft • drapes well • strong • absorbent • warm • resilient / handles well • lightweight 	<p>Part Mark</p> <p>2x1</p>	<p>Total Mark</p> <p>(2)</p>

Question Number	Question	Part Mark	Total Mark
3971_2H_Q04a	<p>Filament fibres can also be manufactured.</p> <p>Describe <u>one</u> characteristic of filament fibres.</p>		
	<p>Answer</p> <p>One way described:</p> <ul style="list-style-type: none"> • long continuous/length fibres which make them appear smooth / shiny / straight / flat • manufactured filament yarns are stretched/drawn which makes them strong 	2x1	(2)
3971_2H_Q04b	<p>Natural fibres are sometimes blended to make yarns.</p> <p>Give <u>one</u> reason for making blended yarns.</p>		
	<p>Answer</p> <p>One reason for making blended yarns given from:</p> <ul style="list-style-type: none"> • combine/add performance properties • more economical/cheaper to buy • add decoration/texture/colour 	1	(1)

Question Number	Question	Part Mark	Total Mark
3971_2H_Q04c	<p>Durability is a property of some fabrics.</p> <p>Use sketches and notes to show how a durability test would be carried out in school.</p>		
	<p>Answer</p>		
	<p>Any four stages from:</p> <p>Durability test instructions - award marks for diagrams & notes.</p> <ul style="list-style-type: none"> • sandpaper block • fabric wrapped around a wooden block or stretched over a jar • rubbed on piece of sandpaper • fair test / count number of rubs / same pressure used / control fabric • results record / amount of wear / holes / pilling 	4x1	(4)
			

Question Number	Question	Part Mark	Total Mark
3971_2H_Q04d	<p>Kevlar is often used for firefighters' uniforms.</p> <p>Give <u>two</u> functional properties of Kevlar that make it suitable for firefighters' uniforms.</p>		
	<p>Answer</p> <p>Two properties of Kevlar given from:</p> <ul style="list-style-type: none"> • flame/fire resistant/proof / non-flammable • resistant to chemicals • durable/tough/hardwearing/strong • lightweight • resistant to piercing / sharp objects 	2x1	(2)
			(Total 11 marks)
TOTAL FOR PAPER: 44 MARKS			

