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## **General Certificate of Education**

# **Design and Technology: Product Design (Textiles) 2560**

*Post-Standardisation*

**TEXT1**

## **Mark Scheme**

*2010 examination - January series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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**COMPONENT NUMBER: 2560**

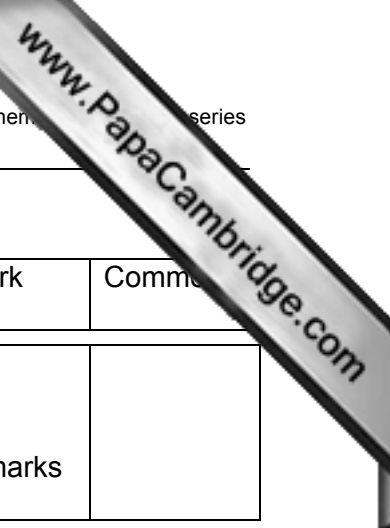
**COMPONENT NAME: TEXT1**

**STATUS: Pre-Standardising**

**DATE: 02-10-09**

NB This mark scheme is intended as a guide to the type of answer expected but is not intended to be exhaustive or prescriptive. If candidates offer other answers which are equally valid they must be given full credit.  
Many responses at this level are assessed according to the quality of the work rather than the number of points included. The following level descriptors are intended to be a guide when assessing the quality of a candidate's response.

<b>(low mark range)</b>
The candidate has a basic but possibly confused grasp of the issues. Few correct examples are given to illustrate points made. This candidate does not have a clear idea of what s/he is writing about.
<b>(mid mark range)</b>
The candidate has some knowledge but there will be less clarity of understanding. Some correct examples given to illustrate points made. This candidate knows what s/he is writing about but is confused in part.
<b>(high mark range)</b>
The candidate has a thorough understanding of the issues and has provided relevant examples to support the knowledge shown. This candidate knows what s/he is writing about and provides clear evidence of understanding.



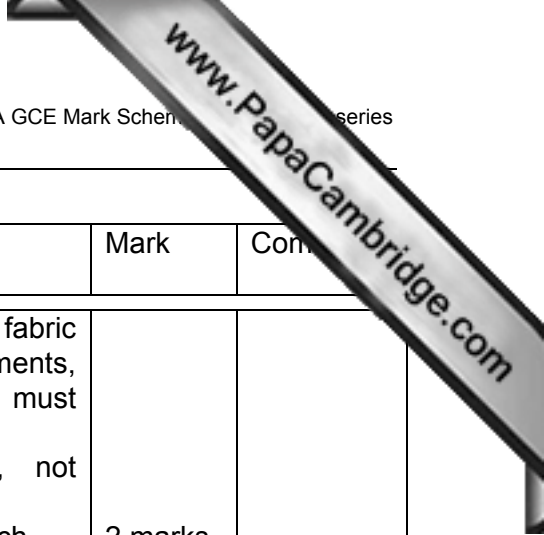
**Section A**

Question	Part	Sub Part	Marking Guidance	Mark	Comments
1	a		e.g. Fibres derived from a natural source (1 mark) modified using chemicals (1 mark) Any 2 appropriate points, 1 mark each	2 marks	
1	b		e.g. viscose, acetate, Lyocell, Tencel, Modal. Any 2 appropriate fibres, 1 mark each but <b>do not accept viscose and rayon</b> for 2 marks.	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
2			e.g. fabrics made up of more than one layer (1 mark) held together with adhesive (1 mark) or thermoplastic fibres (1 mark) Appropriate example, e.g. Gore-tex (1 mark) Any 2 appropriate points, 1 mark each	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
3			e.g. flat pattern shapes for different parts of the garment such as bodice, sleeves (1 mark) used as a starting point to develop fashion template (1 mark)	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
4			To show where different parts of product are to be matched (1 mark) to identify front and back of patterns (1 mark), to indicate placement for e.g., a collar (1 mark) To match checked fabrics (1 mark) Any 2 appropriate reasons, 1 mark each	2 marks	



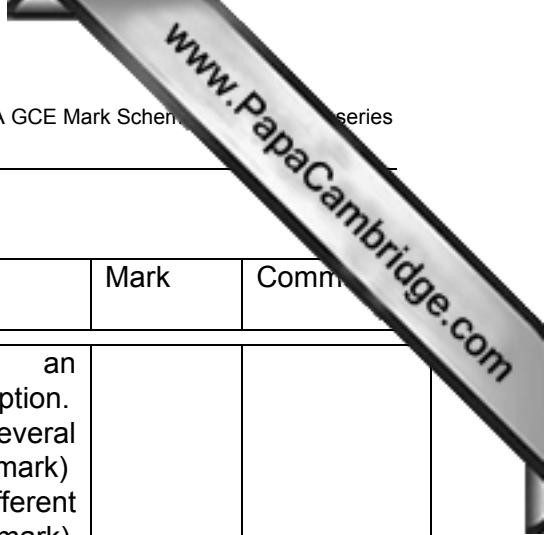
Question	Part	Sub Part	Marking Guidance	Mark	Comments
5			e.g. no cords on hoods, flame retardant fabric for nightwear only – not all garments, elasticated waist trousers, components must not resemble food. N.B this is about design issues, not manufacturing issues. Any 2 appropriate standards, 1 mark each	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
6			e.g. for decoration, to strengthen edges. Any 2 appropriate reasons, 1 mark each	2 marks	

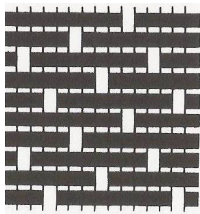
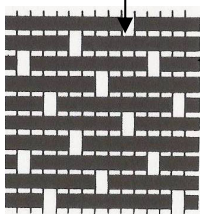
Question	Part	Sub Part	Marking Guidance	Mark	Comments
7			Will give a lustre/shine.	1 mark	

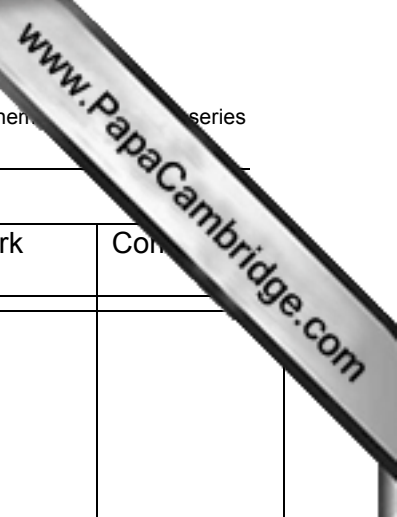
Question	Part	Sub Part	Marking Guidance	Mark	Comments
8			Elastomeric/Elastane	1 mark	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
9	a		e.g. use of pesticides (1 mark) use of fertilisers (1 mark) use of land which destroys environments (1 mark) use of large quantities of water (1 mark) Any two appropriate problems, 1 mark each	2 marks	
9	b		e.g. disposal of dyestuffs (1 mark) use of bleaches (1 mark) chemicals used in fabric finishes (1 mark) heavy machinery uses power leading to global warming (1 mark) Any two appropriate problems, 1 mark each	2 marks	

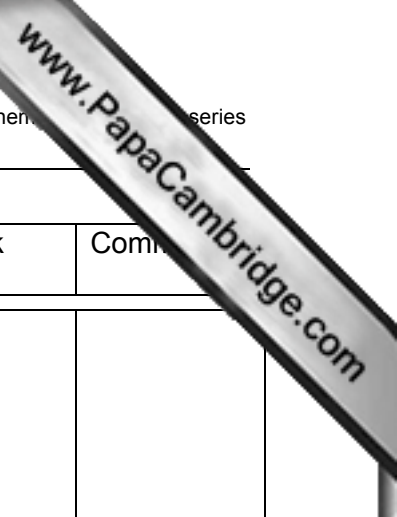


**Section B**

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	a	i	<p>Candidate may respond through an annotated diagram and/or written description. Satin weave: weft yarns pass over several warps then under 1 warp yarn (1 mark) subsequent rows go under warps at different points (1 mark) to leave floats on fabric surface.....(1 mark).</p> <p>An accurate diagram incorporating all points, and clearly identifying warp and weft as shown below will be acceptable for 3 marks.</p> <div style="text-align: center;">  <p>2 marks</p> </div> <div style="text-align: center;">  <p>3 marks</p> </div>	3 marks	

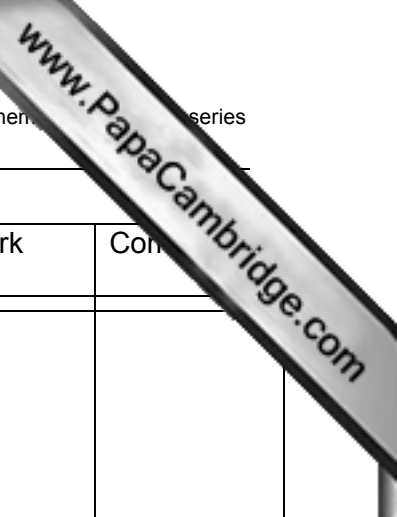


Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	a	ii	<p>Candidate should make reference to the cotton content and the satin weave construction. Points might include:</p> <p><b>Cotton</b> is a strong fibre so will withstand wear and tear, non-static so will not attract dirt so easily, soft handle, can be washed easily. But it is very absorbent so will take a long time to dry and absorb water-borne stains easily, it has poor elasticity so creases badly, it is attacked by mildew if left in a damp state, highly flammable.</p> <p><b>Satin weave</b> adds some lustre, makes the fabric more flexible/softer.</p> <p>But it snags easily so can quickly look worn.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little understanding, simplistic statements only, candidate typically concentrates on limited fibre qualities without reference to structure of the fabric or intended use. There may be confused and inaccurate information with little real evaluation of the fabric's suitability. 0-2 marks</li> <li>• Candidate shows understanding of the contribution made by at least one aspect of the fabric structure but most points will relate to fibre content. There will be a sound attempt to analyse appropriateness of fabric for the runner, but points will tend to emphasize the positive aspects. There may be minor confusion but most points will be accurate. 3-4 marks</li> <li>• Candidate shows sophisticated understanding of the contribution made by several aspects of the fabric structure and fibre content in relation to the runner. Information will be accurate and evaluation will consider a range of positive and negative aspects of the fabric. 5-6 marks</li> </ul>	6 marks	

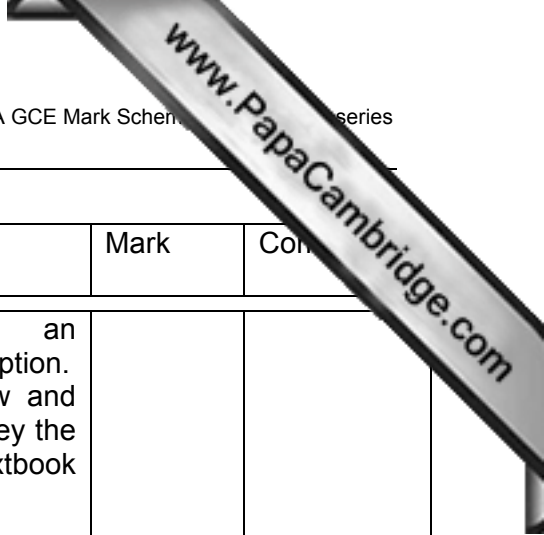



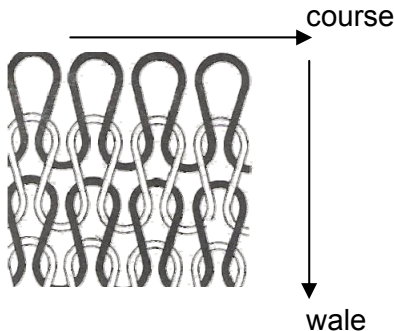
Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	b	i	<p>e.g. use of automated/pre-programmed stitching as a border, and also to emphasize tree shape, zig-zag/ satin stitches to emphasize shape of trees, and also to prevent further fraying of fabrics, references to addition of colour.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little understanding of the function of the various stitches, answer will be very descriptive and confused. 0-1 mark</li> <li>• Sound understanding of the different types and function of the various stitches. Information will be accurate. 2-3 marks</li> </ul>	3 marks	
10	b	ii	<p>e.g. ric-rac and lace-type trims/braid used to emphasize shape and suggest decoration, cream trim used to split main part of runner from decorated section, thread used for stitching, bobbles used to finish end of runner and continue the colour/bauble theme.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little understanding of the function of the various components, answer will be very descriptive and confused. 0-1 mark</li> <li>• Sound understanding of the different types and function of the various components. Information will be accurate. 2-3 marks</li> </ul>	3 marks	

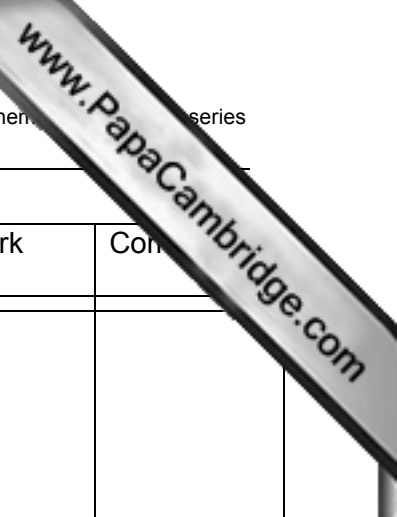




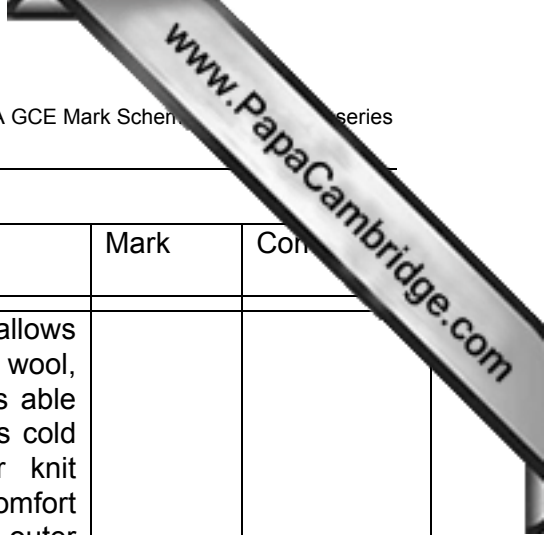
Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	c		<p>e.g. fabric is dyed red (1 mark)</p> <p>spots printed on using chemicals to remove the red colour (1 mark).</p> <p>Also accept:</p> <p>white spots printed on to fabric using discharge chemicals (1 mark)</p> <p>treated areas do not take up colour when fabric dyed (1 mark)</p> <p>2 appropriate points, 1 mark each</p>	2 marks	
10	d		<p>e.g. Dry cleaning prevents colour from fading, fabrics may shrink if washed, different rates of shrinkage in fabrics/trims used, prevent bleeding of colours, fabrics/components are delicate and may be damaged in the washing machine.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little accurate information likely to be based on colour loss/fabric shrinkage or damage to delicate fabrics rather than relating to mixed fabrics/trims. 0 -1 marks</li> <li>• Sound understanding of the issues relating to the care of mixed fabric types and possible damage to fabric/trim. 2 – 3 marks</li> </ul>	3 marks	



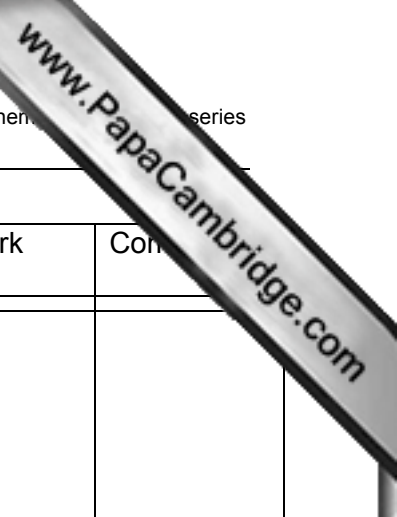
Question	Part	Sub Part	Marking Guidance	Mark	Comments
11	a	i	<p>Candidate may respond through an annotated diagram and/or written description. Knit diagrams can be difficult to draw and examiners should check that they convey the looped structure rather than being textbook versions.</p> <p>Weft knit has a looped structure (1 mark)                      loops interlock with rows above and below (1 mark)                      one yarn used (1 mark).</p> <p>An accurate diagram incorporating all points, and clearly identifying courses and wales as shown below will be acceptable for 3 marks.</p> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; align-items: center; margin-bottom: 20px;"> <span style="margin-right: 10px;">2 marks</span>  </div> <div style="display: flex; align-items: center;"> <span style="margin-right: 10px;">3 marks</span>  </div> </div>	3 marks	



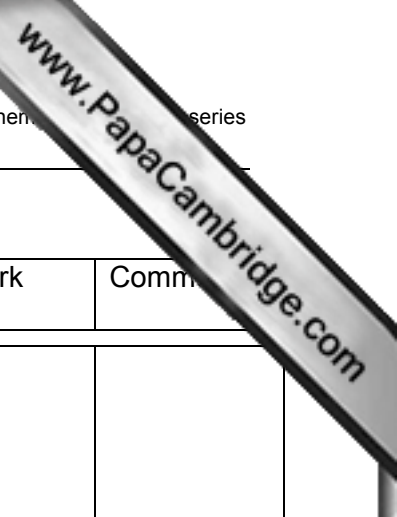
Question	Part	Sub Part	Marking Guidance	Mark	Comments
11	a	ii	<p>e.g. <b>Wool</b> is warm because of natural crimp soft, hardwearing, luxurious, resistant to soiling, resists creasing because of natural crimp, has low electrostatic charge because it is highly absorbent,                      But it is attacked by moths, scales on fibre can cause it to shrink when washed, high absorbency means it takes a long time to dry, it is expensive, it can irritate skin.  <b>Weft knit</b> gives some stretch/elasticity, traps still air but allows moving air through, can snag and pull.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little understanding, simplistic statements only, candidate typically concentrates on limited fibre qualities without reference to intended use. There will be confused and inaccurate information. 0-2 marks</li> <li>• Candidate shows understanding of the properties of wool but does not relate them in detail to the structure of the fibre. There will be a sound attempt to evaluate appropriateness of fabric for a hat. There may be minor confusion but most points will be accurate. 3-4 marks</li> <li>• Candidate shows sophisticated understanding of the properties of the fibre and the knit structure and evaluates them in relation to the hat. Information will be detailed, accurate and include positive and negative points. 5-6 marks</li> </ul>	6 marks	



Question	Part	Sub Part	Marking Guidance	Mark	Comments
11	b		<p>e.g. it has a knitted construction which allows for stretch to match that of the knitted wool, the brushed surface traps air and so is able to insulate, its dense structure prevents cold air passing through from the outer knit structure, the soft surface provides comfort and may prevent irritation from wool outer fabric.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Descriptive of fleece fabric and the most obvious reasons for lining. The candidate will not consider how the lining works in conjunction with the outer fabric. 0-2 marks</li> <li>• Sound understanding of the nature of the fleece fabric and the reasons for the lining. There will be clear understanding of how the fleece works with the outer wool fabric. 3-4 marks</li> </ul>	4 marks	
11	c		<p>e.g. lengths of the coloured wool yarn (1 mark)</p> <p>plaited together (1 mark)</p>	2 marks	

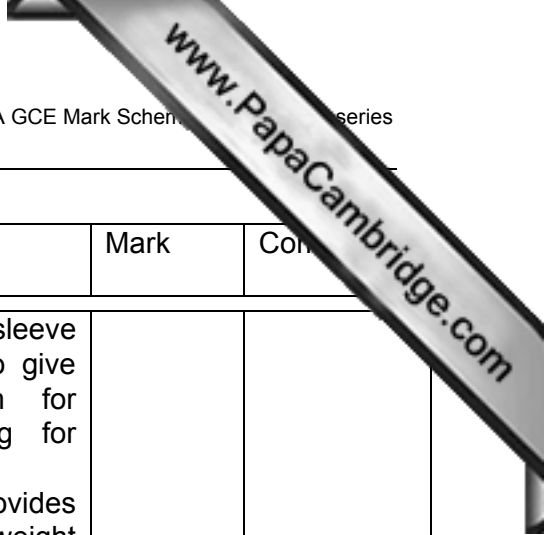


Question	Part	Sub Part	Marking Guidance	Mark	Comments
11	d		<p>e.g. <b>craft manufacture</b> ensures that all products have minor differences which makes them original, this may make them more desirable to consumers and thus more expensive. But the products take longer to make and some consumers may find slight variations unacceptable. It is also possible that low paid workers have been used to manufacture the hat in LEDCs in sweatshop conditions.</p> <p><b>Industrial manufacture</b> will probably use some automated processes to ensure that all hats are identical and that manufacture is fast, This may make than cheaper to buy. But there is still no guarantee that they have not been manufactured using low paid workers.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Candidate provides some description of the different methods of manufacture but will make few comparisons. There may be some confused and/or inaccurate points. 0-2 marks</li> <li>• Detailed knowledge and understanding of the different manufacturing methods with clear comparisons and similarities explained. Points will be clearly expressed and accurate. 3-5 marks</li> </ul>	5 marks	

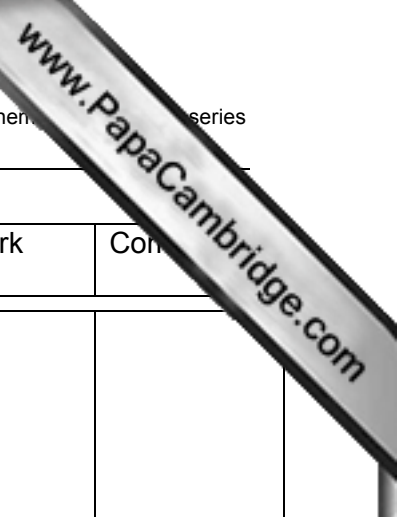


**Section C**

Question	Part	Sub Part	Marking Guidance	Mark	Comments
12	a		<p>Silk filaments are very <b>long</b>, cotton is a <b>short</b> staple fibre (1 mark).                      To blend them,  <b>Either</b> the silk must be cut into short lengths and mixed with the cotton fibres (1 mark)                      They can then be spun into a yarn (1 mark),</p> <p><b>Or</b> they can be core-spun with a silk core (1 mark)                      surrounded by a cotton sheath (1 mark)</p>	3 marks	
12	b	i	<p>Cotton has little elasticity so creases badly (1 mark)                      Silk can also crease badly (1 mark)                      If dried in twisted state and not ironed crinkles will remain (1 mark)</p> <p>N.B if candidate states that 'both cotton and silk crease badly' only award 1 mark – some extra information such as lack of elasticity is needed for 2 marks.</p>	3 marks	
12	b	ii	<p>The question asks for a modification to the fibre content so references to finishes are not acceptable.</p> <p>Include thermoplastic fibre (1 mark)                      such as polyester or polyamide (1 mark)                      Fabric can be heat set into crinkles (1 mark)</p>	3 marks	

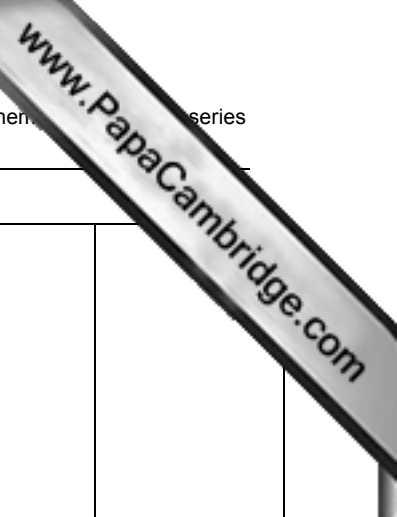


Question	Part	Sub Part	Marking Guidance	Mark	Comments
12	c		<p>e.g. cuffs, front bands, pocket flaps, sleeve and shoulder tabs need interfacing to give support and to strengthen them for buttonholes, collar needs interfacing for support and shape, so it will not flop.</p> <p>A lightweight interfacing will provides sufficient support as this is a lightweight fabric with soft styling. Iron-on would facilitate speed of manufacture, and a white coloured interfacing would avoid any changes of colour in main fabric. Stretch interfacing may be used to allow for crinkle effect.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Candidate lists some places where interfacing would be used with some reasons. There will be little information about type and confused and inaccurate information. 0-2 marks</li> <li>• Candidate shows good understanding of the need to use interfacing in a number of places. There will be some accurate suggestions about the type of interfacing to be used but reasons will be limited and lack detail. 3-4 marks</li> <li>• Candidate shows sophisticated understanding of the need to use interfacing on the top and will provide detailed and reasoned information about the type to be used. 5-6 marks</li> </ul>	6 marks	

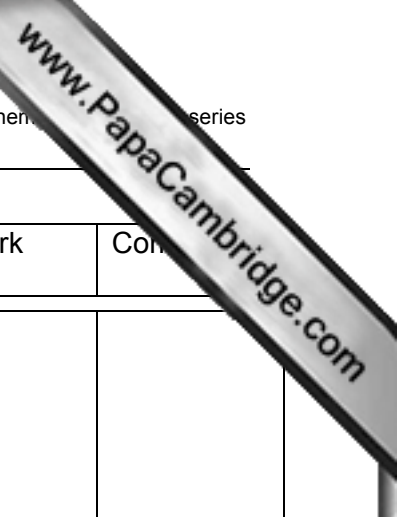


Question	Part	Sub Part	Marking Guidance	Mark	Comments
12	d	i	<p>e.g. to make efficient use of specialised machinery or labour, allow for the manufacture of some sections elsewhere and reduce need for large workforce, to ensure high quality, to make manufacture more efficient.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Candidate provides some basic reasons but there will be a lack of specific detail. There may be some confused and/or inaccurate points. 0-2 marks</li> <li>• Detailed knowledge and understanding of the reasons for sub-assembly systems. Points will be clearly expressed and accurate. 3-4 marks</li> </ul>	4 marks	
12	d	ii	<p>N.B. This is about sub-assembly, not assembly of garment or finishing processes such as sewing on buttons of garment.</p> <p>e.g. sleeve units, collar units, pockets, tabs, cuffs.</p> <p><b>2 different areas, 1 mark each</b></p>	2 marks	





12	e	<p>eg use of Quick Response and JIT systems, CIM systems and EPOS will ensure rapid communication between retailers and manufacturers, goods will be produced as and when demand dictates, with reduced waste and cost.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Candidate shows limited awareness of the various manufacturing systems and offers little information about how they operate. There will be confused and inaccurate information. 0-2 marks</li> <li>• Candidate shows some understanding of the various systems and gives some detail. This may be restricted to a narrow area of focus but will generally be accurate. 3-4 marks</li> <li>• Candidate shows sophisticated understanding of the various systems and is able to provide clear and accurate detail of how they operate. 5-6 marks</li> </ul>	6 marks	
12	f	<p>e.g. to boost flagging sales of standard ranges, to appeal to a wider market, to capture a niche market, to achieve greater recognition as a designer brand, to promote the image of exclusivity, to increase profits.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Some understanding shown, candidate will tend to concentrate on limited number of reasons. Few examples given and points not explained. 0-2 marks</li> <li>• Candidate shows sound understanding of a number of reasons and provides clear examples. 3-5 marks</li> </ul>	5 marks	



Question	Part	Sub Part	Marking Guidance	Mark	Comments
12	g		<p>e.g. up-to-date designs based on current designer fashions, use of different materials, use of more expensive fabrics and components, more elaborate production methods, wider colour/size ranges, better quality finish.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little relevant knowledge shown, candidate typically makes superficial comments without considering a range of methods. Few examples given. 0-2 marks</li> <li>• Candidate shows some knowledge of the constraints and opportunities afforded by the different ranges, and gives some examples to illustrate points made. There may be some irrelevant or confused points. 3-5 marks</li> <li>• Candidate is knowledgeable about the opportunities to design for different ranges and gives a range of appropriate examples to illustrate the points made. 6-8 marks</li> </ul>	8 marks	