



## **General Certificate of Education**

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

**TEXT1**

## **Mark Scheme**

*2009 examination - June 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 any 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: FINAL**

**DATE:27-05-09**

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			<table border="1"> <thead> <tr> <th>Natural cellulose</th> <th>Natural protein</th> <th>Regenerated</th> <th>Synthetic</th> </tr> </thead> <tbody> <tr> <td>linen</td> <td>silk</td> <td>viscose</td> <td>Tactel ®</td> </tr> <tr> <td></td> <td></td> <td></td> <td>elastane</td> </tr> </tbody> </table>	Natural cellulose	Natural protein	Regenerated	Synthetic	linen	silk	viscose	Tactel ®				elastane	5 marks	
Natural cellulose	Natural protein	Regenerated	Synthetic														
linen	silk	viscose	Tactel ®														
			elastane														

Question	Part	Sub Part	Marking Guidance	Mark	Comments
2			<p>Eg do not fray, have no grain/have a random structure, quick manufacture so cheap, do not drape well, weak/tear easily. Not lightweight, insulating/warm, absorbent, permeable, biodegradable, stiff, disposable.</p> <p>Any 2 appropriate properties, 1 mark each</p>	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
3			<p>Eg to add strength to yarn, to hold fibres together/align fibres, gives texture/bulk. Any 2 appropriate reasons, 1 mark each</p>	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
4	a		<p>Selvedge is finished off/does not fray/weft wraps round warp yarns (1 mark) Raw edge is cut edge/will fray (1 mark)</p>	2 marks	

4	b		<p>The thread/line parallel to the selvedge, the straight thread of the fabric.</p>	1 mark	
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Question	Part	Sub Part	Marking Guidance	Mark	Comments
5	a		<p>A raised fabric surface (1 mark) Which lies in one direction/looks different colours when viewed from different angles,/feels smooth/rough when brushed (1 mark)</p>	2 marks	
5	b		<p>Eg velvet, corduroy, needlecord, fur fabrics, velour, fleece, suede, suedette, velveteen. Any 2 appropriate examples, 1 mark each</p>	2 marks	

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Question	Part	Sub Part	Marking Guidance	Mark	Comments
6			Fabric does not lose colour (1 mark), through washing, fading in sunlight, rubbing ( 1mark), strength of dye bond with fabric (1 mark)	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
7			Technical fabrics which are able to change (1 mark), intelligent fabric (1mark) according to their environment/without human intervention (1 mark), appropriate examples (1 mark),	2 marks	

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## Section B

Question	Part	Sub Part	Marking Guidance	Mark	Comments
8	a		<p>Eg <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 become very wet in rain and absorb water-borne stains easily, it has poor elasticity so creases badly, it is attacked by mildew if left in a damp state.</p> <p><b>Plain weave</b> is firm and hardwearing, the tight weave means it will not snag and the lack of texture does not detract from the design of the product – but this could be a drawback.</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. 0-1 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 bag, but points will tend to emphasize the positive aspects. There may be minor confusion but most points will be accurate. 2-3 marks</li> </ul> <p>Candidate shows sophisticated understanding of the contribution made by several aspects of the fabric structure and fibre content in relation to the bag. Information will be accurate and evaluation will consider a range of positive and negative aspects of the fabric. 4-5 marks</p>	5 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
8	b	i	<p>e.g. <b>Polyester</b> is strong, abrasion resistant, hardwearing so will stand up to regular use and friction from bag contents, filament yarn helps make fabric smooth, lightweight so will not make bag heavy, reduces costs, washable like the outer fabric. Soft so does not irritate hands,  <b>Not</b> 'absorbent' 'or waterproof' because polyester is not.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Candidate shows awareness of the properties of polyester fibre but there will be many inaccurate and confused points and little reference to the use of the bag. 0-2 marks</li> </ul> <p>Sound understanding of the properties of polyester. The candidate will have analysed the appropriateness of fabric for the bag and information will be accurate. 3-4 marks</p>	4 marks	
8	b	ii	<p>Lining protects the outer fabric from damage from bag contents, it adds strength and durability, covers construction details, helps prevent creasing. It may help the bag to hang better, and adds quality to the bag, allows for internal pockets, makes it more aesthetically pleasing/fashionable, makes inside of bag softer on hands.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Candidate shows understanding of the reasons for lining the bag but some may be inappropriate for the product. There will be a limited number of points made. 0-2 marks</li> <li>• Detailed knowledge and understanding of the reasons for lining the bag with accurate and well considered points. 3-4 marks</li> </ul>	4 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
8	c		To strengthen edges of bag (1 mark), to add decoration (1 mark), to stop under fabric rolling out (1 mark) clear explanation of point made (1 mark)	2 marks	
8	d		<p>E.g. Nylon zip is lightweight, provides a strong fastening which completely seals the bag, fabric zip pull gives a firmer grip on zip tab, metal strap adjusters provide an easy way to adjust the strap length and match other components used, metal ring to attach strap to bag provides strength and will not break easily, metal buckle adds a decorative feature and will not break easily, eyelets allow strap to fasten and strengthen holes, cotton or polyester cotton thread matches the fibre content of the bag and will not snap easily. NB pockets, flaps and straps are not components!</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Little information about the components, candidate typically gives a list and makes superficial comments about their suitability. 0-1 marks</li> <li>• Candidate provides some information about the components and makes sound attempts to evaluate their suitability but there may be some irrelevant or confused points. 2-3 marks</li> <li>• Candidate gives detailed information about three or more components and provides clear evaluation of their suitability for their use. 4-5 marks</li> </ul>	5 marks	



Question	Part	Sub Part	Marking Guidance	Mark	Comments
9	a		<p>e.g. <b>Polyester</b> is strong, abrasion resistant, hardwearing so will stand up to regular use and friction. Filament yarn helps make fabric smooth, lightweight so will not make jacket heavy, reduces costs, washable, crease resistant, non-absorbent so dries quickly/does not stay wet. Not 'waterproof'. Plain weave makes fabric wind resistant, no texture so print is clearer, gives strength.</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. 0-1 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 jacket, but points will tend to emphasize the positive aspects. There may be minor confusion but most points will be accurate. 2-3 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 jacket. Information will be accurate and evaluation will consider a range of positive and negative aspects of the fabric. 4-5 marks</li> </ul>	5 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
9	b		<p>Teflon gives a water-resistant finish (1 mark) which will also repel water-borne stains (1 mark)</p> <p>It is a high quality fabric finish which will last life of jacket (1 mark)</p> <p>will not affect 'handle' of fabric (1 mark)</p> <p>Any 3 appropriate points, 1 mark each</p>	3 marks	
9	c		<p>Lining makes the jacket easier to wear, adds an insulating layer, helps the jacket drape better, makes it more comfortable next to the skin, helps prevent damage to the outer fabric from perspiration, deodorants and cosmetics. It adds quality to the jacket, covers construction processes and may make it more durable. It allows for internal pockets, makes it more aesthetically pleasing/fashionable.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>Limited knowledge of the use of linings related to the jacket shown. There may be some irrelevant and/or confused points but most will be reasonably well considered. 0-2 marks</li> <li>Candidate shows detailed knowledge and understanding of the use of linings and will relate this knowledge to the jacket shown. Points will be accurate. 3-4 marks</li> </ul>	4 marks	
9	d		<p>To strengthen edges of flap (1 mark), to add decoration (1 mark), defines shape (1 mark), clear explanation of point (1 mark).</p>	2 marks	
9	e	i	<p>Any appropriate fastening, eg Velcro, buttons</p> <p>Not zip, hooks and eyes, press studs, tapes/ribbons, magnetic catches.</p>	1 mark	

9	e	ii	<p>Eg comments related to ease of use, aesthetics, strength, manufacturing issues.</p> <p><b>Marks awarded as follows:</b>                      Limited comparison made, candidate will tend to describe new component suggested and benefits of using it. 0-1 marks</p> <p>Candidate makes effective comparisons between the two fastenings and relates to the pocket flap of the jacket shown.                      2-3mark</p>	3 marks	
9	f		<p>For added strength (1 mark)                      For decoration (1 mark)                      To prevent inner layer of fabric rolling to outside (1 mark)</p>	2 marks	

## Section C

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	a		<p>e.g. Targeted age group - doll is intended as a 'first doll' for children of 12+ months, small size and simple styling help make it appropriate for small hands, bright colours and happy disposition will appeal to young child, soft doll is comforting for small child. Simple styled doll is cheap to manufacture so can be sold at a reasonable price makes it affordable for parents/others to buy as a gift, consideration of safety issues, different textures for child to touch, washable.</p> <p><b>Marks awarded as follows</b> Minimal analysis of doll and appropriateness for small children, there will be elements of misunderstanding and confusion. 0-2 marks</p> <p>Sound analysis which gives detailed consideration to the design features in relation to the target market. Well considered information will be clearly presented and accurate. 3-4 marks</p>	4 marks	
10	b		<p>E.g. the polyester fibre is lightweight, is hygienic as washes easily and dries quickly because of low absorbency, is soft, springs back to regain shape if deformed, hypoallergenic so will not cause adverse reactions in small child, is safe because it does not catch fire, inexpensive.</p> <p><b>Marks awarded as follows</b> Minimal explanation which does not clearly relate to qualities of polyester fibre and end use, there will be elements of misunderstanding and confusion. 0-2 marks</p> <p>Detailed consideration of polyester fibre in relation to end use together with some evaluation of suitability. Information will be accurate and clearly presented. 3-4 mark</p>	4 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	c		<p>The doll must be hand washed because the hair is wool and could shrink in a washing machine because of the mechanical action. It must not be bleached because it is coloured.</p> <p>It must not be ironed because the body is made from polyester fabric which will be melted by heat and the brushed finish destroyed.</p> <p>It must not be dry-cleaned because the residual fumes may be dangerous to a child. It must not be tumbled dry because the heat and friction could cause the woollen hair to shrink.</p> <p><b>Marks awarded as follows</b></p> <p>Minimal explanation which does not clearly relate to qualities of materials used in various parts of the product to the care advised. The candidate will tend to explain what the symbols mean and there may be elements of misunderstanding and confusion. A candidate who accurately identifies 4 or more of the symbols can be given 2 marks. 0-2 marks</p> <p>Detailed explanation of what the symbols mean together with clear explanation of how the advice relates to the qualities of the materials used for the doll. Information will be accurate and clearly presented. 3-5 marks</p>	5 marks	
10	d		<p>E.g. dyeing of dress top, embroidered eyes/mouth, Printing of fabric for skirt/legs, legs knitted/woven in striped pattern. Not tie dye, batik, heat transfer, weaves. 2 methods, 1 mark each</p>	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	e		<p>Eg choice of fabrics and components in relation to flammability and toxicological factors, seams must be well sewn, eyes and other components securely attached, no trailing parts which might choke a small child, QC checks to ensure that products are made to agreed standards and do not pose dangers – check that there are no sharp parts such as broken needles in product.</p> <p>Doll is from a responsible retailer with a reputation to maintain, conforms to EN71, which is concerned with toys for children under 4 years, carries CE mark, which indicates conformity to Toy Safety Regulations, reference to British Standards, label indicates body of doll is double lined to prevent escape of stuffing.</p> <p><b>Marks awarded as follows:</b></p> <ul style="list-style-type: none"> <li>• Basic information covering a limited range of safety issues which are mostly accurate although there will be some misunderstandings. Points will tend to focus on statements about dangers to children without examples of specific dangers. There will be little evidence that the candidate has considered safety information on the label. 0-3 marks</li> <li>• Sound information covering a number of areas accurately, including reference to labelling. Candidate will be knowledgeable but there may be some misunderstandings or omissions. 4-6 marks</li> <li>• Sophisticated and accurate information covering a wide range of issues, including detailed references to information on label. Candidate will be informed and information will be accurate and up-to-date. 7-9 marks</li> </ul>	9 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	f		Designer has a moral right to be the owner of design (1 mark), protects against others copying design (1 mark) clear explanation of point (1 mark)	2 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	g		<p>Candidate should describe a development of the doll to give an alternative design. The new design should be clearly different and be appropriate for older children.</p> <p><b>Marks awarded as follows:</b>            Weak design which lacks clarity about the new character, There will be a lack of information about size, colour, fabrics and other details. 0-2 marks</p> <p>Design is adequate and clearly shows a different character. Information will be sufficient to indicate what is intended but there may be some areas which lack clarity. 3-5 marks</p> <p>Sophisticated design representing a clearly defined character. Information will give clear details of what is intended and doll will be appropriate for intended market. 6-8 marks</p>	8 marks	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
10	h		<p>E.g. CAM is automated production so saves time and cost. Goods are made to a consistent high quality so there is less waste, automation removes the need for some workers saving on costs. CNC machinery are easy to programme so give fast turn round when changes are made to designs, safety in the workplace can be improved, especially when machines perform hazardous tasks.</p> <p><b>Marks awarded as follows:</b>  Basic information covering a limited range of benefits and which is mostly accurate although there will be some misunderstandings. Points will tend to focus on statements about time and costs without explanation of how savings are achieved. 0-2 marks</p> <p>Sound information covering a number of areas accurately. Candidate will be knowledgeable but there may be some misunderstandings or omissions. 3-4 marks</p> <p>Sophisticated and accurate information covering a wide range of benefits. Candidate will be informed and information will be accurate and up-to-date. 5-6 marks</p>	6 marks	