

# **Design and Technology**

General Certificate of Secondary Education **1958/03**

Textiles Technology Paper 3 (Foundation Tier)

## **Mark Scheme for June 2010**

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Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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Question			Expected Answer	Mark	Rationale
1	(a)		<b>6 X 1 MARK FOR EACH ANSWER GIVEN</b> <ul style="list-style-type: none"> <li>Do not wash</li> <li>Tumble dry/ tumble dry low heat</li> <li>Dry clean</li> <li>Product Safety/ Kite mark</li> <li>Flame resistant/ fire resistant</li> <li>European/ Eco label/ Eco friendly/ environmentally friendly</li> </ul>	(6x1) <b>[6]</b>	Any relevant non washing ref. hand or machine  Not child safety
1	(b)		<b>DO NOT ACCEPT CARE OR SAFETY LABELS.</b> <ul style="list-style-type: none"> <li>Name of fibre</li> <li>Fibre/ material % (highest first)</li> <li>Origin of manufacture- Country/ place</li> <li>Address of manufacturer</li> <li>Size</li> <li>Product Code</li> <li>Manufacturers/ shop/designer/ name/ logo</li> <li>Bar code</li> <li>Price</li> <li>Stock control ID</li> </ul>	(3X1) <b>[3]</b>	Do not accept any repeats from 1a
1	(c)		<ul style="list-style-type: none"> <li>Over locking stitch</li> <li>Zig zag stitch</li> </ul>	(1x1) <b>[1]</b>	
<b>Total</b>				<b>10</b>	

Question			Expected Answer	Mark	Rationale
2	(a)		<b>ANY TWO, ONE MARK EACH</b> <ul style="list-style-type: none"> <li>To remove finishes</li> <li>To allow the dye to be absorbed more easily</li> <li>To remove stains/ make sure fabric is clean/ nothing on fabric to affect the colours used</li> <li>To pre- shrink fabric</li> </ul>	(2x1) [2]	
2	(b)		<ul style="list-style-type: none"> <li>To make fabric resist the dye</li> <li>Stop dye running</li> <li>Prevent fabric from absorbing dye</li> <li>To create the pattern/ decorate</li> </ul>	(1x1) [1]	
2	(c)		<b>Apply wax to fabric [1 mark]</b> <ul style="list-style-type: none"> <li>Heat wax</li> <li>Use tjanting tool/ paint brush</li> <li>Cover all of fabric where dye is not wanted</li> <li>Stretch fabric in a ring or frame</li> </ul> <b>Dyeing the fabric [1 mark]</b> <ul style="list-style-type: none"> <li>Dip/ immerse fabric in dye</li> <li>Leave to soak for length of time</li> <li>Paint dye onto areas where it is required</li> </ul> <b>Creating an interesting effect with wax [1 mark]</b> <ul style="list-style-type: none"> <li>Crack / break wax to create pattern</li> <li>Scrape off wax in some areas</li> <li>Draw line pattern into wax</li> <li>Apply another layer of wax onto dyed fabric</li> </ul> <b>Removing the wax [1 mark]</b> <ul style="list-style-type: none"> <li>Iron / hot iron between two absorbent pieces of paper</li> <li>Wash in hot water/wash wax off</li> <li>Pick/ peel wax off</li> <li>Scrape off with a knife</li> </ul>	(4x1) [4]	<p>Marks can be awarded for either words or drawings but not two marks for same point.</p> <p>Do not accept elastic bands or reference to tie-dye techniques.</p>

Question			Expected Answer	Mark	Rationale
2	(d)		<b>Any three, one mark each</b> <ul style="list-style-type: none"> <li>• Face mask</li> <li>• Gloves</li> <li>• Aprons / overall</li> <li>• Wellington boots/ protective footwear</li> <li>• Goggles/ safety glasses/ eye protection</li> <li>• Hair net/ hat</li> </ul>	(3x1) <b>[3]</b>	Marks relate to protective clothing
			<b>Total</b>	<b>10</b>	

Question			Expected Answer	Mark	Rationale
3	(a)		<p>Recycled: <b>(R)</b> (2X1) [2]</p> <ul style="list-style-type: none"> <li>• <b>Reused</b> fastenings / components: zip, button, bead, hook &amp; eye, popper, velcro, piping, braid, lace.</li> <li>• <b>Reused</b> fabrics/ fibres- named fabrics, use of old garments, charity shops, material scraps, wool.</li> <li>• Use of a previous product or that the new product is recyclable/ bio degradable/ sustainable or from a sustainable source.</li> </ul> <p>Embellishment: <b>(E)</b> (2X1) [2]</p> <ul style="list-style-type: none"> <li>• Appliqué, reverse appliqué / molar, shisha, printing, quilting, transfer, dyeing, batik, tie dye, knitting, patchwork, weaving, embroidery hand or machine, beading.</li> </ul> <p>Illustration <b>(I)</b> (2X1) [2]</p> <ul style="list-style-type: none"> <li>• Colour named or shown</li> <li>• Motif or pattern</li> <li>• Design relating to flower or plant theme</li> <li>• Repeated pattern design</li> </ul>	(6x1) [6]	<p>Do not accept or credit named fabrics – it must refer to recycling/ reused</p> <p>Credit 'sequins'- classed as beading</p>
3	(b)		<p>One mark to be allocated for <b>how</b> recycled materials have been used.</p> <ul style="list-style-type: none"> <li>• Decorative/ design technique using scrap materials and components</li> <li>• Reuse of fabric/components</li> <li>• Repair and reuse of components</li> <li>• Cost considerations - fabrics/ components, no need to purchase new</li> </ul>	(2x1) [2]	

Question			Expected Answer	Mark	Rationale
3	(c)		<ul style="list-style-type: none"> <li>• Carbon footprint</li> <li>• Production of fibres</li> <li>• Recycling of materials/ cost/ cheaper</li> <li>• Packaging implications and considerations</li> <li>• Chemicals – use and disposal</li> <li>• Biodegradable / wastage of resources</li> <li>• Cultural issues e.g.: choose to buy recycled products</li> <li>• Moral human/animal welfare.</li> </ul>	(2x1) [2]	Do not accept 'good for the environment'/ environmentally friendly.
			<b>Total</b>	<b>10</b>	

Question			Expected Answer	Mark	Rationale
4	(a)		<b>Any two</b> <ul style="list-style-type: none"> <li>• Reduce amount of packaging used/ pack more in a box</li> <li>• Use recycled materials</li> <li>• Use biodegradable/ environmentally friendly materials</li> <li>• Use non toxic printing inks</li> <li>• Recycle/ reuse carrier bags/ bags for life and other packaging</li> <li>• Use materials which can be recycled/ recycle packaging</li> <li>• Use paper/ card from sustainable /renewable resources</li> </ul>	(2x1) <b>[2]</b>	
4	(b)		<b>Two marks for a well qualified and explained answer, one mark for a brief explanation</b> <b>Disadvantages</b> <ul style="list-style-type: none"> <li>• Morals - child labour, low wages/ sweat shops</li> <li>• Reductions in jobs in this country/ less work</li> <li>• Skills lost in this country</li> <li>• Additional costs re transport &amp; shipping</li> <li>• Faulty goods- expensive to send back/ correct/time</li> <li>• Quality – less control over process/ quality control assurance difficult</li> <li>• Language/ communications barriers</li> <li>• Late delivery/ lost goods/ damaged goods</li> <li>• Carbon foot print issues</li> </ul>	(2x2) <b>[4]</b>	



Question			Expected Answer	Mark	Rationale
4	(c)		<ul style="list-style-type: none"> <li>• Identical, high quality but simple products</li> <li>• Runs 24/7 until production is complete</li> <li>• Used for simply designed products</li> <li>• Products need to have a limited number of components</li> <li>• May use Cam</li> <li>• Less outlay on wages of human workers</li> <li>• Used to make big batches of cheap products</li> <li>• Stops automatically if a fault occurs - sensors used</li> </ul>	(2x2) [4]	
			<b>Total</b>	<b>10</b>	

Question			Expected Answer	Mark	Rationale
5	(a)		<ul style="list-style-type: none"> <li>• Very elastic/ stretchy</li> <li>• Lightweight but still strong</li> <li>• Hard wearing</li> <li>• Resistant to chemicals</li> <li>• Support and comfortable</li> <li>• Moulds to shape/ regains shape</li> <li>• Streamlined/ swim faster</li> <li>• Greater tear resistance – hard wearing</li> </ul>	(2x1) [2]	
5	(b)		<ul style="list-style-type: none"> <li>• Design feature- attractive/appealing/looks good</li> <li>• Acts as high visibility signal in dark areas</li> <li>• Encourages safety and protection</li> <li>• Illuminates when light is shone on it.</li> <li>• Traps and stores energy from a light source</li> <li>• 'Glowes' after wearer moves away from light source.</li> <li>• Non hazardous and non toxic to use</li> </ul>	(2x1) [2]	
5	(c)		<ul style="list-style-type: none"> <li>• Lightweight (not light)</li> <li>• Hardwearing/durable/strong/value for money, protect product from damage</li> <li>• Waterproof/water resistant</li> <li>• Stain proof – keeps it looking good for longer</li> <li>• Fabric is suitable to have a logo applied</li> <li>• Fabric is available in a range of colours</li> <li>• Fabric holds its shape and does not stretch</li> <li>• Easy care – washes and dries quickly/no ironing</li> </ul>	(2x1) [2]	Do not accept breathable or flexible or comfortable.

Question			Expected Answer	Mark	Rationale
5	(d)		<ul style="list-style-type: none"> <li>• Wearable electronics e.g. CD player, mp3 player, mobile phone/ pedometer</li> <li>• Waterproof/ wind protection</li> <li>• Reinforced stitching/ taped seams</li> <li>• Lined with fleece/ faux fur/ removable lining</li> <li>• Underarm ventilation</li> <li>• Pockets- security/ adjustable</li> <li>• Made longer/ shorter – sleeves or length of jacket</li> <li>• Adjustable straps/ cuffs / drawstrings</li> <li>• Removable/ fixed hood/ polo neck/ collar</li> <li>• Front fastening of jacket</li> <li>• Attachable gloves/ heated pads</li> <li>• Clips to attach eg: ski passes/ keys</li> <li>• Elbow protection</li> <li>• Flap/ protection for zip</li> <li>• Safety - avalanche/ signalling device/ high visibility</li> </ul>	(4x1) <b>[4]</b>	Do not credit logos or patterns as they are not modifications to design.
				<b>10</b>	<b>Total</b>

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