

Design and Technology (Textiles Technology)

General Certificate of Secondary Education **A574**

Technical Aspects of Designing and Making

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 Answers	Marks	Rationale	
1	(a)	<p>Any three, one mark each:</p> <ul style="list-style-type: none"> • Follow instructions/COSHH/mix correctly • Well ventilated room/dust/fume extraction • Wear protective clothing – gloves/goggles/apron/mask – protect skin/eyes • Wash hands after use/if gets on skin wash immediately • Don't eat or drink while using dyes • Keep work space tidy and uncluttered • Keep in original container/correctly labelled • Secure storage/locked away/out of children's reach • Secure lid/not leaking <p>Store at appropriate temperature</p>	[1+1+1]		
	(b)	(i)	overlocked seam	[1]	
		(ii)	<p>Accept answers in diagrams or text. Mark correct answers in any box but link to stage.</p> <ul style="list-style-type: none"> • Fast/quick • Neatens and trims excess fabric in one process • Prevents fraying/fabric unravelling/neatens • Stretches slightly so suitable for T shirt and unlikely to snap and make a hole • Strong and hardwearing/lasts longer • Narrow seam – saves fabric and money • Flat seam so comfortable to wear/ no irritation 	[1+1]	
	(c)	<p>Any two, one mark each:</p> <p><u>Preparation of fabric – up to two marks</u></p> <ul style="list-style-type: none"> • Wash/clean fabric • Dampen fabric • Prepare dyes/sort/choose colours • Cut fabric to size/shape 	[1+1]		

Question	Expected Answers	Marks	Rationale
	<p><u>Tying fabric</u> – up to two marks</p> <ul style="list-style-type: none"> • Beads/stones/buttons • Elastic bands/thread/string/yarn • Twist/scrunch/fold/pleat/method of folding given • Tie very tightly/tie where don't want dye <p><u>Dyeing fabric</u> – up to two marks</p> <ul style="list-style-type: none"> • Make up dye bath/add mordant/fixer/salt/follow instructions/microwave • Place fabric in dye bath • Specify time left in • Rinse off excess dye • Allow to dry • Untie • Iron 	<p>[1+1]</p> <p>[1+1]</p>	
	Total	[12]	

Question		Expected Answers	Marks	Rationale
2	(a)	<p>Any three, one mark each:</p> <ul style="list-style-type: none"> • Stretches/will fit well • Warm to wear/insulates • Decorative patterns can be worked into the fabric • Resilient – don't crease • Natural – renewable resource/environmentally friendly • Will resist water – water droplets sit on the surface and can be shaken off • Can absorb a large amount of water without feeling wet or becoming heavy/absorbent • Soft/comfortable/does not irritate/allows head to breath/permeable • Dyes easily/range of colours available <p>Do not accept</p> <p>Fashionable/attractive</p> <p>Drapes well</p> <p>Easy to sew</p> <p>Breathable</p> <p>Dries quickly</p> <p>Lightweight</p> <p>Protects head from wind</p> <p>Easy to wash</p> <p>Durable/hardwearing/strong</p> <p>Cheap</p> <p>Waterproof</p> <p>Keeps shape</p>	[1+1+1]	

Question		Expected Answers	Marks	Rationale
	(b) (i)	<p>Any one, one mark:</p> <ul style="list-style-type: none"> • Waterproofing • Stain resistance • Anti-felting • Mothproofing 	[1]	
	(ii)	<p>One mark for a shallow explanation, two if detailed;</p> <ul style="list-style-type: none"> • Waterproofing – as hat will be worn outside, it may get wet/will keep wearer dry/allow hat to dry quicker • Stain resistance – as hat worn outside it will get dirty easily, particularly in bad weather, will keep it clean longer, reduce washing needed and preserve life of hat, will also help waterproof qualities • Anti- felting – wool felts easily, particularly if not washed carefully, makes it easier to wash in a washing machine and therefore easier to care for, prolongs appearance and life of product • Mothproofing - as a warm hat may only be worn in winter and stored in the summer when it may be attacked by moths and destroyed, avoids need to use mothballs and the smell they generate 	[1+1]	

Question	Expected Answers	Marks	Rationale
(c)	<p>Any six points in a logical order. Can be in note or diagram form:</p> <ul style="list-style-type: none"> • Set up machine with matching thread • Lengthen straight stitch • Loosen top tension • Do one row of stitching on the seam line/stitching line/1.5cm in from edge • Do not fasten off at the start or end of the stitching • Do another row inside the seam allowance • Pull up bobbin/lower threads to gather the fabric • (could pull up the gathers until the top of the hat is closed completely, then secure the ends and stitch the top of the hat to ensure there is no 'gap') • Secure round a pin when gathered the correct amount • Even out the gathers • Secure to second piece of fabric – usually by machine stitching – or method mentioned earlier <p>NB: this method can be worked by hand stitching.</p>	<p>[1+1+1+1+1+1]</p>	
	Total	[12]	

Question	Expected Answers	Marks	Rationale
3 (a)	Any two, one mark each: <ul style="list-style-type: none"> • Thread • velcro • Buttons • Poppers/press studs • Zip • Cord • Toggles/cord locks • Tape (for the taped seams) 	[1+1]	
(b)	No mark for identification of the design feature, two marks for a detailed explanation, one for a shallow one: <ul style="list-style-type: none"> • Fold away hood – protection from the rain but can be folded away so that it does not flap, doesn't look as if it has a hood ,does not get in the way • Double front storm fastening – extra protection from the wind and rain, stops zip leaking and protects it , improves appearance, easy to do up • Two way zip – easy to access pockets in clothes under jacket, prevents heat loss – don't need to undo whole jacket • Taped seams – waterproof , neatening and strengthening • Drawstrings with cord locks – allow bottom of the coat to be pulled up to improve fit, improve insulation and waterproof qualities • Zipped fleece lined pockets – keeps hands warm and protects items in pockets, zips keep contents secure • Large pockets – allows large items to be carried without need for a bag e.g. maps, drinks, keeps hands warm • Zip for insertion of fleece – fleece can be zipped in for extra warmth, removed if hot, keeps fleece in place • Adjustable cuff tabs – allows them to be pulled up to improve fit, keeps heat in and water out, easier to put on and take off, loose or tighten for comfort, safe as not baggy Not reference to Colour Size Fabrics	[1+1 x 2]	

Question	Expected Answers	Marks	Rationale
(c)	<p>Level 1 (0-2 marks) Basic discussion, showing limited understanding. There will be little or no use of specialist terms. Answers may be ambiguous or disorganised. Errors or grammar, punctuation and spelling may be intrusive</p> <p>Level 2 (3-4 marks) Adequate discussion, showing some understanding. There will be use of specialist terms, although these may not always be used appropriately. The information will be presented for the most part in a structured format. There may be occasional errors in spelling, grammar and punctuation.</p> <p>Level 3 (5-6 marks) Thorough discussion, showing detailed understanding. Specialist terms will be used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>Discussion might include reference to:</p> <ul style="list-style-type: none"> • Quicker/saves time/increases production • Less labour/machines need less supervision/reduces costs • More accurate/less human error/neater finish/all the same/consistency • Information can be stored on disk, can be re-used/saves space • Can be adapted/changes and not start from scratch • Can be e-mailed to other manufacturers • More staff training needed • High initial purchase costs and maintenance costs 	[6]	
	Total	[12]	

Question		Expected Answers	Marks	Rationale
4	(a)	<p>Marks allocated as follows:</p> <ul style="list-style-type: none"> • Some attempt made to sketch an idea but no annotation - 1 mark • Two sketches with no notes, or one sketch with notes – 2 marks • Two sketches with some reference to the specification – 3 marks • Two sketches with detailed notes relating back to the specification – 4 marks 	[4]	
	(b)	<p>A maximum of 8 marks to be allocated as detailed below:</p> <ul style="list-style-type: none"> • Colours indicated [1] • Measurements/sizes given [1] • Fastenings shown [1] • Suitable decoration/motif/logo [1] • Pockets [1] • Fabrics (not fibres) indicated [1] • More than one view shown, eg front and back, close up details of an area [1] • Features such as straps to hold blanket/mat to sit on/games to play • Construction details given eg seams, hems, facings, lining, hems, finishing methods [up to 2 marks] • Decorative techniques given eg appliqué, screen printing, machine stitching, transfer printing etc. [up to 2 marks] • Food and drink storage explained eg – cool compartment for food and drink [up to 2 marks] • Consideration of ergonomics explained – eg handles/straps • Appeal to family market explained – eg decoration, cost, colours 	[8]	
Total			[12]	

Question			Expected Answers	Marks	Rationale
5	(a)	(i)	<p>Any two, one mark each:</p> <ul style="list-style-type: none"> • Cheap fabric/calico • Card • Paper • Paper pattern 		
		(ii)	<p>One mark for a shallow explanation, two if detailed:</p> <ul style="list-style-type: none"> • Saves time and money/avoids costly mistakes • Can eliminate problems with the final product/identify problems allowing them to be resolved • Helps planning – order of work, processes to be used to make the item • Checks pattern pieces fit together, finished measurements • Check ideas work before beginning full scale production/testing • Finished item can be tested in use or market research carried out • Improvements can be made – either to design, processes or order of work • Test by referring back to the specification – and customer • Helps with costing – materials needed, equipment and other resources 	[1+1+2]	
	(b)		<p>Level 1 (0-2 marks) Basic discussion, showing limited understanding. There will be little or no use of specialist terms. Answers may be ambiguous or disorganised. Errors or grammar, punctuation and spelling may be intrusive</p> <p>Level 2 (3-4 marks) Adequate discussion, showing some understanding. There will be use of specialist terms, although these may not always be used appropriately. The information will be presented for the most part in a structured format. There may be occasional errors in spelling, grammar and punctuation.</p>		

Question	Expected Answers	Marks	Rationale
	<p>Level 3 (5-6 marks) Thorough discussion, showing detailed understanding. Specialist terms will be used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>One mark for a shallow explanation, two if detailed up to a maximum of 6 marks in total:</p> <ul style="list-style-type: none"> • Source of raw materials – save transport costs if manufacture close to supplier • Labour costs – overseas may have cheaper labour • Customer location – if near to the customer transportation costs will be lower • Economical transport available nearby– train, air, boat, road • Cost of rent and rates, energy costs for running the factory – some locations are cheaper than others • Helping the work force either in this country or in a developing country • Trade with other countries – may harm or help depending on who working with • Moral and ethical issues – fair trade, helping not exploiting the workforce of developing countries • Environmental issues – risks of pollution including light, noise, as well as pollution caused by transportation <p>Skills of workforce – traditional manufacturing areas may have a skilled workforce and not need training</p>		
	Total	[12]	

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