



Cambridge Assessment International Education
Cambridge Ordinary Level

FASHION AND TEXTILES

6130/01

Paper 1

October/November 2017

MARK SCHEME

Maximum Mark: 100

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2017 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

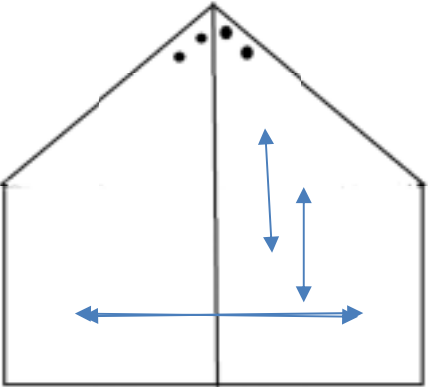
© IGCSE is a registered trademark.

This document consists of **25** printed pages.



Question	Answer	Marks	Guidance
1(a)(i)	Cotton denim is a suitable fabric for the child's dungarees in Fig. 1. Describe cotton denim fabric in terms of the following: Construction; Appearance; Feel/handle. Construction: woven, twill weave, two sets thread warp and weft. Appearance: coloured threads and white threads, diagonal lines on right side of fabric, right side usually darker colour (coloured); both sides of the fabric are different. Feel/handle: firm/hard and stiff, if lightweight, can be soft or brushed surface, diagonal ridges. 1 mark for each point.	3	Not plain weave
1(a)(ii)	State two reasons why cotton denim is a suitable fabric for the style of the child's dungarees in Fig. 1. Keeps its shape well; hardwearing/durable, easy to get a good finish on pockets, straps, etc.; strong (enough to hold buckles); 1 mark for each relevant point. (Marks not awarded for absorbency / washability as these are not related to style of garment.) No marks for fibre properties.	2	Not easy to decorate
1(a)(iii)	Cotton denim fabric could have a stain resistant finish applied. State two advantages of using this finish on the fabric for the child's dungarees in Fig. 1. Children spill things on their clothes, so easier to keep clean. Less washing needed if stains are avoided. Fabric not marked permanently by spillages. Accept any other correct point. 1 mark for each point.	2	
1(a)(iv)	State one suitable fabric, other than cotton denim, to make the child's dungarees in Fig. 1. gabardine, twill/drill, corduroy, poplin, piqué 1 mark for any appropriate, correctly named fabric.	1	Fibre name not needed.

Question	Answer	Marks	Guidance
1(a)(v)	Give two reasons to explain why the fabric in 1(a)(iv) is suitable for childrenswear. Reasons: hardwearing/durable; strong; washable; easy to mend if torn/holes appear; any other relevant point related to childrenswear. Credit correct reasons, even if the fabric is incorrect in the previous answer (i.e. error is not carried forward). 1 mark for each point.	2	
1(b)(i)	The child's dungarees in Fig. 1 have a faced hip pocket at the waistline. State one suitable fabric to use for the pocket facing/lining. Fabric needs to be thin, e.g. cambric, lawn, gingham, poplin, or calico. Fabric needs to be different from the cotton denim. Accept any other lightweight and suitable fabric. 1 mark for suitable fabric.	1	

Question	Answer	Marks	Guidance
1(b)(ii)	Draw and label the following pattern symbols on Fig. 2: • straight grain line; • centre back line; • dots to show the position of both straps.  1 mark for grain line; 1 mark for centre back line; 1 mark for two or four dots in correct position to indicate position of straps; 1 mark for correct labelling of all three markings.	4	

Question	Answer	Marks	Guidance
1(b)(iii)	Explain, using notes and labelled diagrams, how to alter the front and back trouser leg pattern pieces of the dungaree pattern in Fig. 1 to make the trouser legs 2 cm narrower at the hem edge. Draw a pencil line along outside edge of trousers pattern side seam from knee to hem; the width should get wider toward the hem. • Measure and mark 1cm from the outer leg seam along the bottom edge of each trouser leg pattern piece. • Draw a pencil line within the pattern piece from the mark to join the existing cutting line at the knee. This will create a piece to remove which is wider at the bottom of the trouser. • Cut off the excess pattern • Straighten the line from the crotch/waist to the hem if necessary. • Do front and back pieces to match OR To narrow both the outer and inner leg seams, on each trouser leg mark 0.5cm at the hemline on the outer and inner leg seams. • Draw a pencil line from the hip/knee or crotch to the new point at the hemline to create the new seam lines. • Draw a new seam allowance and cutting line, on the front and back leg seams. • Check you have altered the correct amount, before folding under or cutting away any excess paper pattern. Accept any reasonable method of making the trouser leg pattern narrower. Max of 3 marks if no diagrams, but measurements must be correct. If no measurements given, max 2 marks. No marks unless related to pattern piece. Credit labelled diagrams. 1 mark for each correct point.	4	Must relate to pattern not garment

Question	Answer	Marks	Guidance
1(b)(iv)	State two pieces of equipment needed to place the bodice back pattern on the fabric and attach it ready for cutting out. Pins; tape measure/ruler; weights; tailor's chalk. 1 mark for each correct equipment.	2	
1(c)(i)	State the two different fastenings used on the child's dungarees in Fig. 1. Buttons; buckle/clasps ; parachute clips 1 mark for each correctly named fastening	2	
1(c)(ii)	Explain why these fastenings are suitable for the child's dungarees in Fig. 1. Answer could include: • buttonholes and buttons/buckle and button are easy for a child to fasten • position is easy to see • can be adjusted to allow for growth. 1 mark for each reason.	2	
1(d)(i)	Top stitching is used as a decoration on the child's dungarees in Fig. 1. Give the machine stitch settings for top stitching. Set stitch to largest/longest stitch length, e.g. 3--5 Stitch width: zero Straight stitch. Up to 2 marks for any two points.	2	
1(d)(ii)	State two reasons why machine top stitching is used on the front bodice of the child's dungarees in Fig. 1. • Strengthening • To add contrasting colour • Make neat/more attractive/appealing. 1 mark for each point.	2	Not decoration, stylish or fashionable.

Question	Answer	Marks	Guidance
1(e)	Complete the correct sequence to make the straps for the child's dungarees in Fig. 1. Method 1: • apply interfacing • place RS together pin and tack • machine 1.5 cm from edge • leaving one end open • remove tacking • trim • turn through to RS (with safety pin or turner) • press with seam line at the edge or in the centre • repeat for second strap. Method 2: • turn/press seam allowance to WS • tack • fold along centre fold line • pin, tack and stitch long edge • remove tacking • press. Must be in the correct sequence. 1 mark for each correct point. Note: If a candidate puts two correct answers in one box, they can be awarded an extra mark. Mark positively, giving marks for longest correct sequence.	5	

Question	Answer	Marks	Guidance
1(f)	There will be cotton denim fabric left over after making the child's dungarees in Fig. 1. Suggest two ways in which cotton denim fabric could be used in another textile item. Items could be: parts of garments using more than one fabric; bags, cushions, belts, small tops, sections/panels on skirts etc., or small items using one fabric. Ways of using denim: applique, patchwork, contrasting pocket, hem, contrasting collar, part of an item, e.g. flap of a bag, or mattress filling. The fabric must be used in two different ways, e.g. patchwork and applique. 1 mark for two different textile items that describes the same way for reusing the denim. 2 marks for 1 item showing 2 ways of reusing denim. 1 mark for any appropriate method of reusing the denim.	2	Accessory is too vague. Not test cloth or rags.
1(g)(i)	State one production method that could be used to manufacture a small quantity of the child's dungarees in Fig. 1. Batch production.	1	

Question	Answer	Marks	Guidance
1(g)(ii)	Explain why this production method is suitable to produce a small quantity of the children's dungarees in Fig. 1. • Only correct amount of fabric purchased before production run/less wastage. • Fashion garments (even for children) change with fashion and batch production is more flexible for specific numbers of items. • Different batches could be different colours/styles. • Teams of workers make the items and they are multi-skilled staff, so they can make different parts of the items or even different batches. • This method is more cost effective for the manufacturer as batches are made up as needed: there will not be a large surplus of items that cannot be sold. Give credit for correct reasons for 'one-off' or 'mass-production' if one of these is given in (g)(i). 1 mark for each point.	3	

Question	Answer	Marks	Guidance
2(a)(i)	Explain how the following fabrics are constructed - Cotton Towelling: • (pile) weave • two sets of threads (warp and weft) • another (weft) thread is used to make the loops which are not cut • loops on both sides of the fabric. Give credit for sketches, however must be labelled. 1 mark for each point.	3	
2(a)(ii)	Viscose Velvet: • (pile) weave • two sets of threads (warp and weft) • another (weft) thread is used to make the loops (pile) • the loops are cut to form the pile. Velvet can also be made by weaving two fabrics together and cutting the yarns between them to make the pile on two pieces of fabric. Give credit for sketches, however must be labelled. 1 mark for each point.	3	Not knitted - that is velour.

Question	Answer	Marks	Guidance
2(b)(i)	Describe the performance characteristics of viscose velvet in relation to: Absorbency The absorbency of velvet fabric is dependent on the fibre it is made from. • Viscose is a highly absorbent fibre. • It is the most absorbent of all cellulose fibres/ is more absorbent than cotton and linen. • Absorbs dyes well. • Rayon absorbs perspiration and allows it to evaporate away from skin, so is cool to wear in summer. 1 mark for each point.	2	
2(b)(ii)	Mildew Resistance • Mildew is a micro-organism that grows in damp conditions; black dots form on the surface of the fabric and cannot be removed. • Like cotton, viscose is a cellulose fibre and can be affected by mildew. • Viscose is not affected by mildew as much as cotton. • Viscose fabrics should always be stored dry to avoid mildew. 1 mark for each point.	2	
2(b)(iii)	Flammability • Viscose is a cellulosic fibre and will catch fire and burn easily. • A flame retardant fabric finish can be applied but may make the fabric stiffer. • Velvet fabric is especially susceptible to burning because there are more loose fibres in the construction (pile) and more air spaces, which makes the fabric burn more readily. 1 mark for each point.	2	

Question	Answer	Marks	Guidance
2(c)	Explain how to care for cotton towelling. Include sketches of care symbols in your answer. • Hot wash/ wash tub with 60 or 90 °C. • Plain white fabric can be washed at higher temperatures. • Darker colours might be washed at 40 °C. • Line dry. • Avoid drying coloured cotton in strong sunlight to avoid fading. • Can be tumble dried. • Hot iron (3 dots) or no ironing required. • Can be bleached if white, but not otherwise in case colour is affected. • Not usually dry cleaned; • Fabric softeners can be used to soften, but this may affect the absorbency. • Storage: towelling should be clean and dry before storing to avoid mildew. • Store in a dry, ventilated place to avoid mildew. Include care symbols: wash, line dry, tumble dry, bleach and no dry clean. Give credit if correctly labelled. 1 mark for each point.	8	

Question	Answer	Marks	Guidance
3(a)	Sketch and label the front view of an original design of a gathered skirt for a teenager. The skirt should have a stiffened waistband with a fastening and be decorated using tie dye. • waistband (1) • tie dye decoration is drawn or explained (1) • colour: can be shown/indicated either by crayon or label (1) • a functional fastening, e.g. zip/buttons and buttonholes/lacing and eyelets/hooks and eyes/etc. (1) • an interesting and original design (1). 1 mark for each point. Max of 3 marks if no labelling.	4	
3(b)	Explain, using notes and labelled diagrams, how to tie dye the skirt using two colours. • wash fabric to remove chemicals • prepare fabric for chosen tie and dye method, e.g. use string, elastic bands, stones, beads, buttons, dried peas, folding etc. • weigh fabric/calculate amount of dye etc. • prepare dye (powder or mordant, e.g. salt, hot water, dye bath etc) • put fabric in dye solution/dye fabric the first colour • rinse and dry fabric • repeat for second colour • untie • iron out creases. (Also accept method for microwave dyeing.) 1 mark for each (labelled) point (could be drawn or written). Max of 5 marks if no diagrams.	6	

Question	Answer	Marks	Guidance
3(c)	State two environmental concerns that need to be considered when dyeing fabrics. Answer could include: • toxic dyes should not be used as they may harm wildlife • dyes should not go straight into water disposal channels/systems without filtering first, or care should be taken when disposing of water containing dye • a lot of water is used in the dying process, or water should be recycled as much as possible. 1 mark for each well discussed, appropriate point.	2	

Question	Answer	Marks	Guidance
3(d)	Explain how to prepare and attach a stiffened waistband to a skirt. You should use notes and labelled diagrams in your answer. • Cut suitable weight of interfacing for fabric. • Trim if necessary. • Either tack onto wrong side of waistband or fuse using an iron/heat. • Machine ends of waistband (right sides together) • Trim interfacing, layer seams; turn through to right side; press • With right sides facing (or RS of waistband to WS skirt), pin and tack waistband to top of skirt which has already been gathered a little; adjust gathers. • Match any balance marks or notches. • Machine waistband on seam line (1.5cm). • Trim/layer seams. • Press seam towards waistband. • Fold waist band along fold line. • Turn under the seam allowance on the other edge of waistband and either machine or hand stitch second side of waistband in place, using hemming stitch or top stitching to secure. Alternative method is to make the waistband leaving one long edge not stitched, stitch to skirt RS together, overlock the edges together on the edge, press the seam down towards the skirt. 1 mark for each point, instructions need to be in logical order; allow marks for appropriate labelled diagrams. Max 7 marks if no labelled diagrams.	8	

Question	Answer	Marks	Guidance
4(a)	Explain, using notes and labelled diagrams, how to work a double machine stitched seam on the side seams of the child's dungarees in Fig. Method 1: • with right sides together, machine a plain 1.5cm seam • machine a second row of stitching 1/8 inch or 3mm from first row within the seam allowance • second row of stitching can be straight stitch, zigzag stitch or overlocked • trim the seam • press to one side • mostly used on stretchy or knit fabrics or to prevent fraying. Credit candidates who press the seam to one side and then top stitch through both layers of seam allowance and the main fabric from the right or wrong side. Method 2: • with right sides together, machine a plain 1.5cm seam • press seam open • turn to right side and stitch the seam allowance down on either side of the seam line • stitching will be straight stitch and 1/8 inch to 1/4 inch from seam line • may use a contrasting colour as decorative top stitch • makes a strong seam. Give credit for labelled diagrams; seam instructions must be in a logical order. Accept any reasonable method of making a double machined seam. Not a French seam or a flat felled seam. 1 mark for each relevant point. Maximum mark of 5 marks if no diagrams.	6	

Question	Answer	Marks	Guidance
4(b)(i)	Explain, using notes and labelled diagrams, how the following hand worked stitches are worked on the faced hip pocket on the child's dungarees in Fig. 1 in Section A. Loop stitch:  Any relevant answer, which will depend on the sketches shown. Loop stitch could be worked along the edge of the pocket in a contrasting colour. It could also be used in the centre of the pocket to produce a specific design, e.g. circle. Could be hemming/buttonhole stitch, chain stitch etc. Any suitable stitch using a loop. How the thread is fastened at beginning and end (1) How needle is positioned on the fabric (1) Where the thread is in relation to the needle (1) Position on pocket (1). For 3 marks the answer must relate to the faced hip pocket; diagrams must be labelled to get a mark. Max 2 marks if stitches not shown on faced hip pocket or if no diagrams. 1 mark for each relevant point and correct working method for stitch.	3	

Question	Answer	Marks	Guidance
4(b)(ii)	Running stitch:  Any relevant answer, which will depend on the sketches shown; this could be worked along the edge of the pocket in a contrasting colour. • How the thread is fastened at beginning and end (1) • How needle is positioned on the fabric (1) • Where the thread is in relation to the needle (1) • Position on pocket (1). For 3 marks the answer must relate to the faced hip pocket; diagrams must be labelled to get a mark. Max 2 marks if stitching not shown on faced hip pocket or if no labelled diagrams. 1 mark for each relevant point and correct working method for stitch.	3	

Question	Answer	Marks	Guidance
4(c)	Discuss four health and safety factors which need to be considered when using sewing machines in the production of garments. Answers must relate to garment production methods, not classroom rules. • Training must be given because machines can specialise in different functions, e.g. buttonholes or overlocking • There may be risks in using machines, e.g. noise (ear protectors to be worn); needle may bend/break (needle guard may be used); very fast • Could be a danger of electrocution if cables are not well maintained etc. • Protective clothing must be worn if needed, e.g. overalls/tabards so own clothes do not get caught in machinery • Hair tied back • Regular breaks • Good lighting • Regular maintenance of machines • Warnings about any risks must be displayed • Ventilation and dust extraction (especially for overlockers) • Good organisation of work areas to avoid tripping hazards and leave fire exits accessible. Any other relevant point. 1 mark for a brief point; 2 marks for a well discussed point; each point to be relevant.	8	

Question	Answer	Marks	Guidance
5(a)	Explain, with the use of examples, what is meant by the following textile terms Water repellency: • Fabric has a specific finish, e.g. silicone to repel water. • The fabric is immersed/coated in the finish and very little if any water is able to penetrate into the fibre. • Garments can be retreated with wash-in silicone solutions. • Some fabrics (e.g. cotton) are more absorbent than others, so would benefit from this finish if the fabric was used for a raincoat. • Applied to performance fabrics such as Goretex to prevent them absorbing water. Examples of finishes: wax/silicone finishes; Teflon; PVC (polyvinylchloride). Examples of uses: raincoats/walking trousers, umbrellas etc. 1 mark for each correct point.	4	
5(b)	Reflective textiles used on outdoor wear; • It can be made from fabrics containing glass beads which are reflective only in the dark when a light is shone on them, e.g. Scotchlite tape. • It can be made from fabric with reflective inks and coatings which react to light in the same way. • Uses: safety at night especially if near traffic; any situation where reflective tape will offer protection. Examples of uses: coats, jacket, bags, cycling clothes, running clothes and shoes, children's schoolwear, uniforms (such as police and fire services), life jackets and on vehicles. 1 mark for each relevant point.	4	

Question	Answer	Marks	Guidance
5(c)	Wool felt: - It is a non-woven material; wool fibres have scales on the surface of fibres so they felt easily in the right conditions. - Heat, agitation and agents such as soap can affect the surface of the fibres, so the scales fuse together and shrink the fabric; this can be done by accident if the garment is badly washed or can be used deliberately to produce felt fabric. - Felt can be produced at the fibre or fabric stage of manufacture. It can be moulded to shape when damp. Felt can also be produced by needle punch method where a barbed needle is stabbed into the fibre repeatedly until the fibres fuse together. This is a dry method and can be done by hand or machine; mainly used for decorative work. Examples of uses: clothing, hats, bags, fire blankets, decorative work, cushions, soft toys, slippers, pool table, notice boards. 1 mark for each relevant point.	4	
5(d)	Anti-static finish: - Man-made fibres absorb very little water so may be affected by a build-up in static electricity. - Static may cause dirt, fluff and other things to stick to the surface, making the fabric hard to clean. - Garments made from synthetic fibres (nylon, polyester, acetate) and silk, which are being worn together, may cling together. - Chemicals are sprayed onto fabric during manufacture to make the fabric more absorbent; this finish stops fabric 'clinging'. - The fabric can be treated e.g. with fabric softener, which lubricates the surface and reduces static. 1 mark for each relevant point.	4	

Question	Answer	Marks	Guidance
5(e)	Elastane: - Elastane is the generic name for elastic synthetic (polyurethane) fibres which are very stretchy and are often used in a blend with other fibres, such as cotton or wool, to improve performance. - It can be used in different proportions depending on the performance properties required for the fabric. The higher the proportion of elastane the more stretch in the garment. A low proportion, e.g. 3%, would just help a garment to keep its shape. - Elastane is hard wearing, lightweight, strong, resistant to chemicals and damage from perspiration, sun and sea and can be easily dyed. Examples of uses: lingerie, swimwear and sportswear. Trade names: Lycra, Spandex 1 mark for each relevant point	4	

Question	Answer	Marks	Guidance
6(a)	Draw and label an original design which would be suitable for block printing onto a cotton lawn scarf. • Accurate drawing of a suitable design, which may show scarf • Indication of type of block to be used • Design shown is a repeat pattern • Origin and development of design indicated, e.g. stylised flower • Indication of how/where design will be used on a scarf. Only 1 mark if complete sketch with no labelling. 1 mark for each point.	3	
6(b)(i)	Explain, using notes and labelled diagrams, how to: (i) Prepare a block for printing the design in 6(a). • Block can be made from wood, polystyrene, metal on wood, lino, vegetables, etc. • Design is drawn onto the block or transferred to block using appropriate software/CAD/CAM • Design is cut out, e.g. if using wood, the unwanted wood is carved away leaving the design in relief/cut using laser cutter design. 1 mark for each relevant point. Max 2 mark if no labelled diagrams.	3	

Question	Answer	Marks	Guidance
6(b)(ii)	Prepare the cotton lawn fabric for printing. • Wash cotton lawn to remove dirt and allow fabric to shrink • Iron to remove creases/straighten • Apply size or starch to the fabric so that it can withstand being stretched. This also helps to keep its shape as cotton lawn is thin fabric • Place fabric on a padded surface, e.g. a blanket to help the printing ink to be absorbed in the fabric/or on paper/card, to stop the print going through • Fabric may be stretched/taped down onto a printing table • Mark the fabric with chalk or other means to indicate where the print is to be applied • Paint/dye background colour before printing. 1 mark for each relevant point. Max 2 marks if no labelled diagrams.	3	
6(b)(iii)	Print the design onto the cotton lawn fabric. • Place printing ink in a shallow printing tray, possibly covered with a soft absorbent surface such as a layer of thin sponge; this will help to get an even layer of printing ink on the block to be printed • Place the block on the printing tray to load the block with ink /or the ink may be applied to the block with a roller or brush • Place the block on the fabric where indicated; if the printing block is thin, a roller/pressure could be used to make sure the block prints evenly. • Remove the block and repeat • If more than one colour is needed in the design, several blocks will be needed and each colour will be printed and dried before the next colour is printed • When the ink is dry, remove the fabric from the table and fix the colour according to the printing ink used (this may be by ironing, steaming or another method) • Wash the fabric, if necessary, to remove size/dressing/starch if it was used to stiffen the fabric. 1 mark for each relevant point. Max 5 marks if no labelled diagrams.	6	

Question	Answer	Marks	Guidance
6(c)	Explain how your design in 6(a) could be adapted to make it suitable for roller printing • Roller printing normally done in manufacturing to print a large amount of cloth/fabric in a short amount of time • Roller printing is continuous, so the design will need to be adapted so it fits together around the roller/size or proportions of design may be changed • Edges of design may be modified so parts of the design fit together better/ design may have to be simplified • One roller is needed for each colour in the design • The roller may be made of metal rather than wood or other material, which may affect the intricacy of the design. 1 mark for each relevant point.	5	