

MARK SCHEME for the October/November 2015 series

6130 FASHION AND TEXTILES

6130/01

Paper 1, maximum raw mark 100

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 will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2015 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

Section A

1 Refer to the sketch of a sports top in Fig.1.

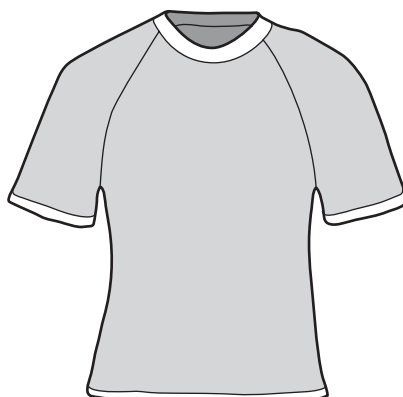


Fig. 1

(a) (i) Polyester jersey fabric is suggested for this style. State how this fabric is constructed and give two reasons why this fabric is suitable for the sports top in Fig. 1.

Name of fabric	Polyester jersey
How fabric is constructed	Weft knitted/knitted [award 1 mark only]
Reason 1	Knitted fabric, stretches with the body during sports movement: [1 mark]
Reason 2	Lightweight fabric, can be modified to make it more absorbent: [1 mark] Polyester is cheap to produce so is affordable [1 mark]

Any other relevant point: Credit correct reason for wrong construction method. Not fibre qualities.

1 mark for each point. [3]

(ii) State the origin of polyester fibres.

From a petrochemical source.

Or

Chemical from petroleum/terephthalic acid and ethylene glycol. [1]

- (iii) Suggest a suitable knitted fabric which could be used to make the sports top in Fig. 1. Give two reasons for your choice.

Name of Fabric	Cotton jersey, tricot, any jersey, microfibre
Reason for choice	Loose fitting style so still moves with the body [1 mark]
Reason for choice	Give flexibility when the body moves Stretches. Because it's used for sport [1 mark]

If no fabric is named – no mark should be awarded. Allow answers relating to relevant fibre qualities if fibre and fabric name stated.

1 mark for each correct point.

[3]

- (iv) The neckline in the sports top Fig 1 has a shaped facing. Suggest one suitable alternative neck finish for the neckline and give one reason for your choice.

Alternative neck finish	Reason for choice
Bound opening (Bias) binding Knitted ribbing [1 mark]	The neckline is shaped and bound opening is usually made with fabric strip cut on the bias/ true cross which moulds well on curved edges. Easy fit [1 mark]

[2]

- (v) State two chemical fabric finishes which would be suitable for a sports top made from a polyester fabric, and give one reason for each choice.

Name of Chemical fabric finish	Reason for choice
Stain resistant [1 mark]	Reduces stains staying on the fabric; sports clothes often get stained e.g. grass or mud
Anti static [1 mark]	Polyester absorbs very little so the fabric is prone to static charges; anti-static finishes reduce the tendency of fabric suffering from static charge if there is friction from other fabrics. To stop fabric sticking to skin during sports activities [1 mark]

Accept any other suitable finishes for polyester. Allow water repellent: Reason must relate to sport.

2 marks for each finish.

[4]

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- (vi) Suggest two different methods of colouring the fabric for the sports top before it is made into a garment. Give one reason to explain why each method is suitable.



Method of colouring	Reason for suitability
Dyeing (in batches) [1 mark]	Sports tops often in one colour of sports teams so batch produced according to needs. [1 mark]
Roller printed /printing [1 mark]	One side only can be printed so only a specific amount of fabric is produced to order. To create an all over design. [1 mark]

Accept any other alternative answers. Reason must refer to sports top. Looking for manufacturing method.

Maximum of 2 marks for each method.

[4]

- (vii) Complete the table by naming each pattern marking and stating one reason for using each on a pattern.

Pattern Marking	Name of Pattern marking	Reason for use
	Lengthening and shortening line [1 mark]	The pattern can be altered easily if these lines are used as it causes minimal alterations to style lines of the pattern piece; where garment can be altered/adjusted. [1 mark]
	Sewing or stitching line (which is 1.5cm from the cutting line) Seam line/fitting line [1 mark]	The fabric is stitched together using this line which is usually 1.5cm from the cutting line [1 mark]

Watch out for repeated information.

1 mark for each correct point, maximum of 2 marks for each pattern marking.

[4]

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- (b) (i) Name the style of sleeve shown on the sports top in Fig. 1 and suggest two reasons why this type of sleeve has been used.

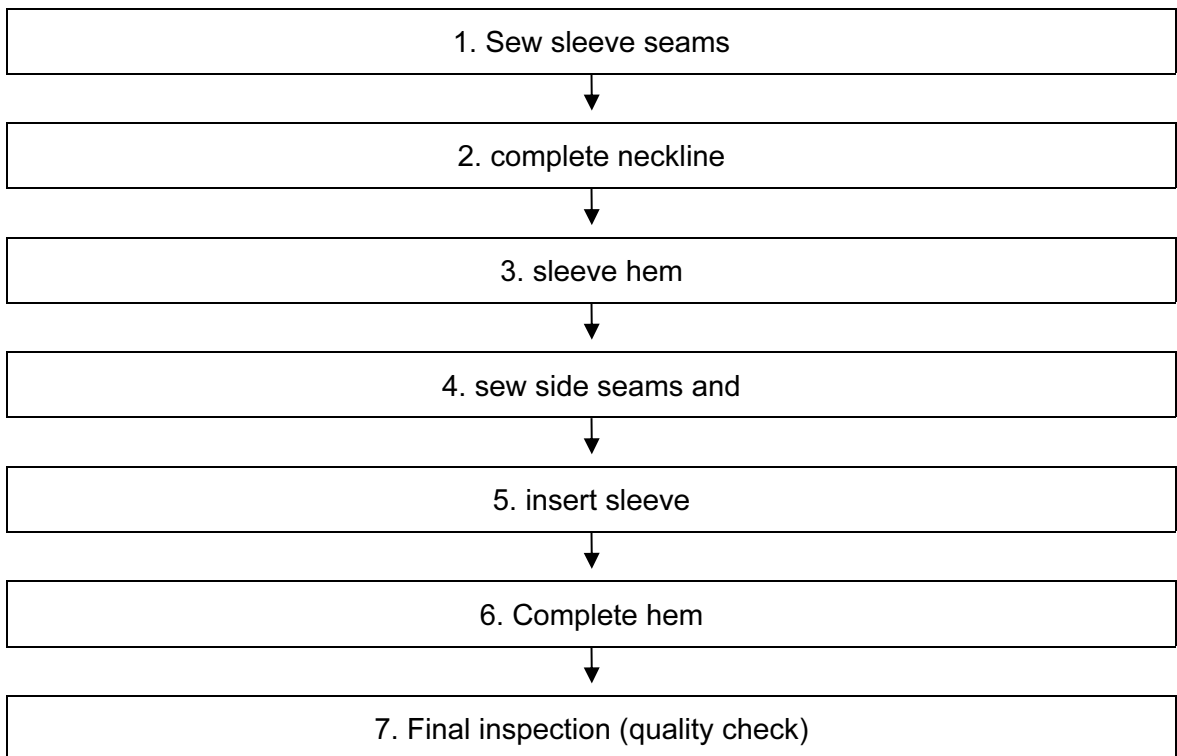
Raglan sleeve

[1]

Reason 1	Easy fitting in shoulder position and as this is a sports top, the arms are likely to be moved a lot. Can move easily/flexible [1 mark] Do not credit comfortable
Reason 2	Easy to sew this type of sleeve in batch production [1 mark]

1 mark for each correct reason even if sleeve is incorrectly named or not named. If set-in sleeve or short sleeve is named give marks for any correct reasons for using these sleeves on sports shirt. [2]

- (ii) The sports top in Fig. 1 is to be made using batch production. Complete the table to show a suitable sequence of processes for making the sports top. (The first and last boxes have already been completed.)



Award 1 mark for each process in correct order.

[4]

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- (iii) Sketch an original design for a logo which would be suitable for the sports top Fig. 1, including the position on the sports top.

Any suitable simple sports logo, not a copy of something used already.
No marks for a copy of an existing logo.

1 mark for a clear sketch – it does not need to be labelled.

1 mark for position on sports top.

[2]

- (iv) State what is meant by CAM in textile production.

Computer Aided Manufacture

[1]

- (v) Explain how CAM can be used to produce the logo you designed in (b) (iii).

Answers could include:

- (Multi-headed) embroidery machine (CNC) is used which will produce the logo;
- different colours may be used in one logo e.g. usually up to 8 colours;
- machine will be programmed by computer;
- computer printing (e.g. digital);
- any other relevant point.

1 mark for each brief point to a maximum of 2 marks or 2 marks for a well explained point.

[2]

- (c) (i) Explain two environmental factors to consider before using polyester fabrics for clothing.

Answer could include:

- polyester uses chemicals which are non-renewable;
- polyester as it is not bio-degradable;
- some people prefer to use fabrics which are natural, even organic and polyester is neither of these;
- disposal of polyester may cause pollution to the environment;
- adds to landfill;
- greenhouse gases during production;
- transportation;
- any other relevant point.

1 mark for a brief point.

Maximum of 2 marks for a well explained point (x2).

[4]

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(ii) Suggest one fabric which can be recycled and which is a suitable alternative to the polyester jersey used for the sports top in Fig. 1.

Answers could include:

- cotton jersey could be used;
- cotton is bio-degradable and is usually from a sustainable source;
- cotton jersey is recyclable;
- linen jersey;
- nylon jersey;
- any one of these points or any other suitable.

No marks for just the fibre or fabric.

1 mark for a correct point.

[1]

(iii) Explain how the fabric suggested in 1(c)(ii) can be recycled.

Answers could include:

- re-use the fabric for something else e.g. use as a rag/cleaning cloth;
- put fabric in clothing bank/charity so the fabric can be shredded and made into mattress fillings;
- if the fabric is not too weak, make something else from it/upcycle the garment;
- cut up and make patchwork item;
- any other appropriate point.

1 mark for a brief point.

2 marks for a well-explained point.

[2]

[Total: 40 marks]

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Section B

Answer **three** questions from this section.

2 Viscose is often used to make fashion garments.

(a) (i) **State the origin of viscose fibres.**

Pulp from trees/ cotton linters and chemicals such as caustic soda/ sodium hydroxide.

1 mark for correct point. [1]

(ii) **Viscose is a regenerated fibre, explain what *regenerated* means.**

Regenerated means that the natural/cellulose e.g. wood chips are first dissolved in chemicals and then re-appear in a different form.

1 mark for correct point. [1]

(iii) **Describe viscose satin in terms of the following:**

Viscose Satin	
Surface appearance	Shiny right side, reflects light 1 mark
Construction of the fabric	Woven/ satin weave/ floats on surface of right side 1 mark. Not plain weave.
Handle of the fabric	Floppy fabric/ slippery/ drapes well/ soft 1 mark

Any other relevant descriptive words.



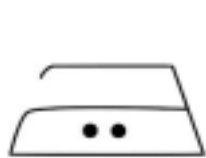
1 mark for each point. [3]

(iv) **Explain how viscose fabrics perform for the following characteristics:**

Performance characteristic	How viscose fabrics perform
Abrasion resistance	Viscose is not very hard wearing and it can be damaged by abrasion [2 marks]
Absorbency	Viscose is at least as absorbent as cotton so is comfortable to wear/absorbs dye well [2 marks]

1 mark for a brief point and 1 mark for a detailed explanation. [4]

(b) (i) Complete the table below to show your understanding of the care needed for viscose fabrics.

Care instruction	Sketch of the symbol	Temperature
Washing	 (also accept hand inside wash tub) Give mark for wash tub even if temperature is wrong	 40 degrees C
Ironing		150 degrees C

1 mark for each point.

[4]

(ii) Viscose fabrics can have colour added by the stencilling method.

Explain what is meant by *stencilling*.

A piece of card/plastic is cut to make a design (e.g. flower) and the colour is applied onto the fabric through the cut-away part, by brush or sponge. [1]

(iii) Explain, using labelled sketches, how to stencil a design onto a viscose fabric.

Answers could include:

- cut design using a craft knife/sharp scissors;
- prepare colour/dye by putting onto a plate/ could also have a thin layer of sponge on plate on top of dye to get more even colour;
- place fabric on flat surface with padding to get a more even application of colour;
- place stencil onto fabric and secure so it does not move;
- load piece of sponge or stencil brush with colour/dye, removing excess;
- apply colour onto fabric through the stencil;
- remove stencil and allow to dry;
- iron on reverse of fabric to fix the colour/dye.

The method needs to be in a logical order; not all the above needs to be included but enough of the processes to show understanding of the stencilling process needs to be present for full marks; give credit for labelled sketches

1–2 marks for brief notes and possibly no sketches.

3–4 marks for some detail, sketches included (or no notes).

5–6 marks for detailed notes including sketches.

[6]

[Total: 20 marks]

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3 Decoration and embellishment are often used in contemporary fashion.

(a) (i) Sketch and label a knee length skirt. Add a design for the hemline which includes a lace trim and hand embroidery.

Answers could include:

- any suitable sketch of a knee-length skirt; [1 mark]
- labelling needed of hemline, lace trim, and hand embroidery;
- 1 mark for each correct label; sketch must be good quality for full marks
- [max 1 mark if description but no sketches]
- lace trim – [1 mark]
- hand embroidery – labelled – [1 mark]
- correct position of lace/hand embroidery – [1 mark labelled]
- labelling – [1 mark]

[4]

(ii) Give further details of the embellishment to be used on the skirt in 3(a)(i).

Lace trim	Name of stitch to attach the trim Straight/zigzag stitch by machine; or running stitch by hand; or any other suitable stitch by hand	Type of thread Polyester/cotton/viscose machine thread
Hand embroidery	Name of embroidery stitch Stem stitch/satin stitch/fly stitch/etc.; any suitable	Type of thread Embroidery thread Perle / stranded/viscose floss/knitting wool

1 mark for each correct point.

Only one mark if both threads the same.

[4]

(iii) Explain how to produce a good quality finish where the lace is joined together.

Answers could include:

- raw edge/ cut edge of lace needs to be finished by turning under 1cm and over-sewing neatly/machine stitching with straight stitch or zigzag stitch; if machined, this may show on the right side.
- trim any raw edges using small scissors that will not damage lace.
- press the join in the lace.
- alternatively, the lace can be stitched on the skirt pieces before the side seams/other seams are joined so that the lace edge will be already enclosed in the seam.

Either method acceptable as long as description is clear and sketch shows details.

1 mark for stitching.

1 mark for brief description of how to use stitching to neaten the edge of the lace.

2 marks for more detailed description of how to neaten the edge of the lace.

[3]

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(b) (i) State three checks you could make on your sewing machine before starting to sew

Answers could include:

- make sure the electric leads/flexes are not frayed or damaged;
- make sure the machine is in good working order and that there are no damaged parts e.g. needle should be sharp and not broken;
- make sure the settings on the dials are correct;
- correct needle for the fabric;
- the machine is threaded correctly/bobbin inserted correctly.

1 mark for each correct check (any three). [3]

(ii) Explain three factors to consider when preparing fabric for machine embroidery.

Answers could include:

- where/how to mark the fabric with the position of the embroidery e.g. chalk or tacking;
- how to prepare the fabric e.g. make sure the fabric is clean, flat (ironed free of creases) and has no pins in the way of the embroidery;
- what sort of embroidery you will be doing e.g. whether the fabric needs to have any stiffening (Interfacing) or backing (stitch and tear) before stitching; or if it needs to be stabilised.
- whether the fabric needs to be placed in an embroidery hoop so that it is stretched/tight.

Up to 2 marks for each point explained. [6]

[Total: 20 marks]

4 (a) State three factors to consider when deciding which components to purchase when making garments at home.

Answer could include:

- the sort of fabric you are using e.g. lightweight fabric will need lightweight components such as a zipper with nylon teeth instead of metal teeth;
- what colour components should be used with the item e.g. buttons to match or contrast with the item;
- are the components to be visible (decorative) or just functional/use and hidden/enclosed in seams;
- cost of the components;
- availability;
- user of garment (ease of use e.g. children);
- what the components are made from e.g. button from shell or plastic (washability; care of components).
- use/style/function of garment.

1 mark for each correct point. [3]

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- (b) (i) Draw one garment showing two original ways of using a crossway strip. Label two style features.

Answer could include:

- used as a binding (visible on both sides) e.g. edge of an armhole, neckline or patch pocket, etc.;
- used as a facing (visible only on one side) e.g. on outside of neckline, on hemline, etc.;
- used in a seam e.g. as piping;
- use of striped fabric, e.g. diagonal lines showing;
- any other relevant point.

Up to 2 marks for use of crossway strip.

Up to 2 marks for labelling style features.

1 mark for good quality sketch.

[5]

- (ii) Explain how to cut a crossway strip. You may use labelled diagrams in your answer.

Answer could include:

- find true cross of fabric (could use selvedge(s) [right angle] or follow warp and weft threads); [1]
- fold fabric at 45 degrees to both warp and weft threads and crease with iron or draw chalk line; [1]
- cut along the line; [1]
- decide on width of crossway strip and draw lines in chalk, parallel to the cut edge; [1]
- cut the strips, making sure they are all the same width. [1]

1 mark for each point up to a maximum of 4.

[4]

- (iii) Explain how to join a crossway strip. You may use labelled diagrams in your answer.

Answer could include:

- line up the warp threads along two short sides, (right angles).
- place right sides of fabric together;
- make sure there is a triangle shape of fabric overlapping at each end of the place where the seam is to be stitched;
- pin and tack 6mm (or 1cm) away from the raw edge (this will be the width of the seam allowance), remove pins;
- machine along this line in straight stitch;
- trim triangles to make edge straight
- remove tacking and press seam open.

A diagram counts as a step if it communicates the meaning

1 mark for each step up a maximum of 4.

[4]

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(c) (i) Explain what is meant by *eco-labelling*.

Answer could include:

- a label informing the consumer about the origin of the fabric and details as to whether the fabric/garment is environmentally friendly in its production;
- or sustainable;
- “the EU Ecolabel helps you identify products and services that have a reduced environmental impact throughout their life cycle, from the extraction of raw material through to production, use and disposal”
- voluntary scheme which manufacturers use to produce information about their textile products;
- can be recycled.

1 mark for 2 brief explanations or an understanding of environmental impact.
2 marks for detailed explanation.

[2]

(ii) State two reasons for using fabrics which have eco-labels.

Answer could include:

- you know that the fabric has been produced with beneficial environmental considerations e.g. cleaner and less pollution;
- the product may have used less chemicals e.g. less dye used or dye which does not use so much water;
- consumers may be attracted to buy the product as they may feel they are doing their part in reducing global warming by being 'green';
- the product may be recyclable, and/or sustainable and/or organic and/or use natural dye sources;
- other point explained such as cleaner/reduced transport/local production.

1 mark for each of 2 different points.

[2]

[Total: 20 marks]

5 There are many factors to consider when making children’s clothes.

(a) (i) Give two reasons why French seams are often used on garments for children.

Answer could include:

- raw edges are enclosed so no raw/fraying edges to irritate the skin;
- seams are strong due to two rows of stitching so suitable for garments which need frequent washing/which need to withstand wear and tear while playing.

Accept any other appropriate point/reason.
1 mark for each reason/point.

[2]

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(ii) Name two appropriate fabrics on which French seams could be worked.

Answers could include:

- cotton lawn; cotton/polyester lawn; cotton cambric; cotton muslin; tetron;
- other fabrics which are not listed in the syllabus e.g. silk georgette; cotton voile;
- crepe
- cotton poplin;
- cotton seersucker;
- cotton gingham;
- fabrics chosen must be lightweight/thin.

Do not accept fibres or calico.

1 mark for each appropriate fabric.

[2]

(iii) Explain how to make a French seam, using labelled diagrams.

Answer could include:

- wrong sides together first;
- stitch on 5mm/10mm line;
- trim raw edge close to stitching;
- press so that the right sides are facing;
- pin/tack and machine along the 1cm/1.5cm line (which is the seam line as 5mm has already been stitched)
- press seam to one side (or back of garment).

1 mark for each correct point. They need to be in logical order for full marks.

Max 3 marks if no sketches are included with notes.

[6]

(b) (i) Explain three factors which need to be considered before buying clothes for young children.

Answer could include:

- how old the child is – young children need soft fabrics which do not irritate the skin; appropriate fabric designs for age;
- how much money there is to spend on the clothes;
- are the clothes for school wear or for play – different performance characteristics needed;
- how hardwearing the clothes will be (choice of fabric);
- are the clothes easily washed/have stain resistant finish as children's clothes get dirty quickly;
- colour of clothes (light colours show the dirt more);
- allow for growth;
- style e.g. easy dressing; move in/age suitable/fastenings e.g. ease of use;
- fabric – lightweight for comfort when moving.
- non flammable.

Do not credit – just comfortable.

Any other appropriate points.

2 marks each for three different well explained points.

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- (ii) Discuss two advantages of making clothes for children instead of buying them ready-made. [6]

Answers could include:

- can make the clothes to fit exactly to specific body shapes;
- can look around for cheaper fabrics/sale items/fabric remnants to reduce costs;
- can allow extra fabric on hems so that if the child grows quickly, the item can be altered;
- can re-use patterns you already have if you make lots of clothes already;
- individual items, can add decoration etc;
- easy fastenings;
- can choose fabrics;
- can use strong/hardwearing construction/sewing methods.

1 mark for each brief point discussed. Max 2 marks.

2 marks for a detailed point. [4]

[Total: 20 marks]

- 6 (a) (i) Give two reasons why a fabric with a brushed finish is suitable for an item of sleepwear.

Answer could include:

- warmer;
- softer;
- more comfortable.

1 mark for each correct point. [2]

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- (ii) Explain what is meant by each of the following finishes and name one fabric on which each could be used.

Answer could include:

Easy Care:

- chemical finish which can be added to fabrics (such as cotton poplin for men's shirts) to reduce creasing and the need for much ironing; makes easier to wash, stops shrinking;
- could have resin added (chemical) which changes the handle of the fabric – may be slightly stiffer but smoother; resin may be heated to cure it;
- suitable fabrics examples such as: Cotton poplin; cotton chambray or any other suitable.

1 mark for a brief explanation.

2 marks for a detailed explanation.

1 mark for a suitable fabric.

[3]

Calendaring:

- fabrics which are often cellulose based such as cotton or linen can have a fabric finish applied; durable finish;
- the surface of the fabric can have a resin (chemical) applied and then a roller is applied under pressure (and heat) to make the surface very smooth;
- textured surfaces can also be applied;
- Suitable fabrics examples such as: Cotton cambric and cotton calico can have this finish applied; cotton gabardine, various linen, rayon, silk (moiré) fabrics. (Not just fibre)

1 mark for a brief explanation.

2 marks for a detailed explanation.

1 mark for a suitable fabric.

[3]

- (b) (i) Give two examples of where interfacing would be used on garments. Give one reason for each suggested use of interfacing.

Answer could include:

- examples: collar – to stiffen; Button band – to strengthen;
- waistband: to stiffen/strengthen/reinforce/shape;
- lapel collar/facing – to stop stretching;
- hem – to stop fraying.

1 mark for example up to 2 marks.

1 mark for each reason up to 2 marks.

[4]

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(ii) Explain how to attach a non-woven fusible interfacing to cotton gabardine.

Answer could include:

- place fusible/shiny/glue side to wrong side of fabric; [1]
- correct iron temperature for fabric (warm or hot iron); [1]
- hold iron down (pressure); [1]
- protect iron/ironing board in case of excess glue. [1]

1 mark for each correct point, up to 4 marks.

[4]

(c) Discuss two benefits of using thermoplastic fabrics for a pleated skirt.

Answer could include:

- does not crease; easy care; non-iron; pleats stay in/are set by heat;

1 mark for a brief explanation of each point.

2 marks for a detailed explanation.

Maximum of 2 marks per benefit.

[4]

[Total: 20 marks]