



GCSE Bitesize Examinations

General Certificate of Secondary Education

Design and Technology
Textiles Mark Scheme

Total marks: 100

1a)

(i) Award one mark for each of the following

(2 marks)

Flame resistant (1) to prevent fabric from burning (1) to protect child from fire (1) required by law (1)

(ii) Award one mark for each of the following

(2 marks)

Breathable (1) so perspiration evaporates (1) during exercise (1) provides wear comfort (1)

(iii) Award one mark for each of the following

(2 marks)

Absorbent (1) absorbs water (1) so dries well (1)





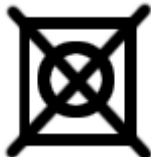
(iv) Award one mark for each of the following

(2 marks)

Crease resistant (1) so it looks smart (1) needs little ironing (1) easy care (1)

1b) Award one mark for each example

(3 marks)

				
Machine wash medium action Wash as wool	No chlorine or bleach	Warm iron Iron as wool	Dry clean	Do not tumble dry

1c) Award one mark for each of the following

(3 marks)

Absorbent (1) comfortable to wear (1) soft handle (1) good drape (1) machine washable (1) warm (1) fluffy (1)

2a)

(i) Award one mark for one of the following

(1 mark)

- cotton
- linen
- wool
- silk

(ii) Award up to three marks for a well explained method

(3 marks)

- Embroidery (1) using hand stitching (1) or machine stitching (1) and different coloured threads (1) to create repeated patterns (1) all-over designs (1) or border designs (1) or single designs (1)
- Tie and dye (1) fabric tied tightly (1) or machine gathered tightly (1) and immersed in dye (1) tied parts resist dye (1) ties undone (1) dye heat set (1)
- Appliqué (1) using cut out shapes (1) bonded (1) stitched around shapes (1) onto base fabric (1) to create patterns (1)
- Silk painting (1) outline of patterns (1) drawn on fabric with gutta pen (1) gutta resists fabric paint (1) spaces filled with silk paint (1) gutta stops paint from spreading (1) paint heat set (1)
- Screen printing (1) transfer design stencils to screen (1) dye pushed through fabric screen (1) using squeegee (1) stencil resists dye (1) dye heat set (1)
- Batik (1) hand (1) or machine method (1) parts of fabric covered with wax (1) dipped in cold dye (1) waxed areas resist dye (1) heat used to remove wax (1) repeated for each colour (1)

(iii) Award one mark for a suitable cushion cover design produced by their chosen method.

Award one mark for detail of placement of design and colours used.

(2 marks)

2b)

(i) Award one mark for one of the following

(1 mark)

- velcro
- press studs
- poppers
- zip
- buttons and button hole
- ties

(ii) Award marks for a suitable explanation of the method for attaching the fastening. Award marks for detail to include suitability for cushion, stitching method, ease of fastening.

(3 marks)

2c)

(i) Award one mark for each example

(2 marks)

- raw materials
- prototype cushion
- assembly
- final product

(ii) Award up to two marks for each explanation of the examples listed previously. **(4 marks)**

- Raw materials - tested for correct width (1) colour (1) weight (1) fibre content (1) durability (1) shrinkage (1)
- Prototype cushion - to trial cushion design (1) trial materials (1) test pattern (1) try out assembly processes (1) work out costs (1) test fitness for purpose (1)
- Assembly – checks on stitch accuracy (1) seam strength (1) seam allowance (1) fastenings (1) tolerance (1) against manufacturing specification (1).
- Final product is inspected (1) against high quality sample (1) for correct size (1) for ‘look’ (1)

3a) Award one mark for each example

(2 marks)

- Light in weight
- Adjustable straps
- Strong straps
- Separate compartments
- Secure fastenings
- Made from waterproof materials

3b) Award one mark for each example

(2 marks)

- Tear-resistant
- Strong
- Hard-wearing
- Waterproof
- Can be wiped clean

3c) Award up to three marks for the explanation

(3 marks)

Detailed 3D model (1) to test backpack before manufacture (1)

To trial the design (1) test materials (1) test the pattern (1) try out the assembly processes (1)

3d) Award up to five marks for the explanation

(5 marks)

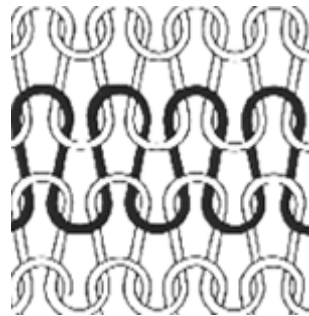
- Speeds up production
- repeatable process
- always the same
- easy to programme machines
- colours are matched to design
- dyes weighed automatically
- fabric printed automatically
- needs fewer employees
- lower wage bill
- increased profits

4a)**(i)** Award one mark for each example**(3 marks)**

Ability to stretch (1) and regain shape (1) in width (1)

Comfortable fabric (1) as moulds to body shape (1) flexible for movement (1)

Warm as traps air (1)

(ii) Loops interlock vertically (1) along length of fabric (1) will not ladder (1) can't be unravelled (1) can be cut without fraying (1)**(2 marks)****(iii)** Marks awarded for diagram which clearly shows features/construction of weft knitted fabric. Detail to include horizontal row of loops (wale), vertical column of loops (course).**(3 marks)****4b)** Award one mark for each benefit and one mark for each example**(6 marks)**

- Speed (1) less time taken to knit jumpers (1) higher production rate (1) automates production (1)
- Consistency of jumpers (1) e.g. all size 12 same size (1) better quality (1) as fewer human errors (1)
- Lowers cost of jumpers (1) as made faster (1) with fewer employees (1)
- Increased safety (1) knitting machines stop if fault occurs (1)
- Reduced waste costs (1) through use of CAD processes (1)
- Knitting processes easily repeated (1) and accurately (1) data stored and easily reloaded (1) and easily changed for new design (1)

4c) Award one mark for each example**(6 marks)**

- Consumer preferences (1) and values (1) influence what they buy (1)
- Social issues include lifestyle (1) - jumpers must suit consumer activities (1)
- Social issues include fashion (1) – the need to appear ‘fashionable’ (1) so know what is the ‘in’ thing (1)
- Jumpers need to suit male or female consumers (1) both have different needs (1) e.g. colour preferences (1) design / pattern (1) shape (1) size (1)
- Peer group pressure (1) influences young people (1) to buy fashion clothing (1)
- Importance of brands (1) that influence consumers to buy (1) to get right ‘image’ (1) e.g. Nike sportswear (1)
- Social influences include TV / music / films / celebrities / magazines / street fashion (1).

5a)

(i) Award one mark for one of the following

(1 mark)

- polyester microfibre
- nylon microfibre
- Gore-Tex

(ii) Award one mark for each reason

(2 marks)

Polyester / nylon microfibre

- breathable
- shower-proof
- lightweight
- soft
- good drape

Gore-Tex

- breathable
- waterproof
- lightweight

(iii) Stitch the seams then tape and heat seal them to prevent rain going through

(2 marks)

5b) Award marks for key phrases as set out below

(4 marks)

Laminated membrane is a layer of breathable synthetic material (1) bonded to any other fabric (1) using adhesive (1) or heat (2) lets perspiration evaporate (1) but is waterproof as rain can't get through (1)

5c) Award marks for examples in the correct sequence

(5 marks)

- Sort fabric into bundles and label
- Construct and attach pockets
- Construct hood (1) sleeves (1) front flap (1)
- Join shoulder seams
- Attach hood (1) and front flap (1)
- Join sleeves (1) and stitch side seams (1)
- Finish hem (1) and attach poppers (1)

6a) Award one mark for each answer

(4 marks)

Preparation	Prepare patterns
Processing	Spread fabric
Assembly	Join fabric pieces
Packaging	Pack product

6b) Award one mark for a suitable example and the remaining three marks for the benefits.
Vilene (1 mark)

Used to reinforce (1) stiffen (1) and give strength (1) to collars and facings and prevents fabric from stretching (1) or sagging (1) makes fabric stable and strong (1) (3 marks)

6c) Award up to four marks for the key words as shown below. (4 marks)

- CAD is used to draw pattern pieces (1) block patterns (1) are digitised (1) and stored in a database (1)
- Production patterns (1) are modified (1) and graded in range of sizes (1)
- Blazer parts are sorted automatically into lay plan (1) to produce minimum fabric waste (1)

7a)

(i) Award up to two marks for the key words as shown below. (2 marks)

Pressing shapes (1) stabilises (1) and sets materials (1) using dry heat (1) or steam (1)

(ii) Award one for each pressing process and one mark for each explanation. (4 marks)

- Under pressing (1) reduces shrinkage of fabrics (1) removes creases (1) and makes sewing easier (1)
 - Moulding (1) stretches (1) and sets 3D shapes in fabrics (1) at top of sleeves (1) or darts (1)
- Top pressing (1) is final pressing (1) to make products ready for sale (1)

7b) Award up to six marks for the keywords as shown below. (6 marks)

- Manufacturers undertake risk assessment (1) of all stages of product manufacture (1) to identify (1) and reduce hazards in manufacture (1)
- Safety procedures (1) must be displayed (1) and followed (1)
- Workers must be trained (1) to use machines and equipment (1)
- Protective clothing must be worn (1)
- All risks must be controlled (1) and monitored (1)