



General Certificate of Secondary Education

**Design and Technology
(Textiles Technology) 3547**

Full Course Foundation Tier

Mark Scheme

2007 examination - June series

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QuNo	Response to be awarded credit	Mark	Total
NB	<p>This mark scheme is intended as a guide to type of answer expected but is not intended to be exhaustive or prescriptive. If candidates offer other answers which are equally valid they must be given full credit.</p> <p>Points given are examples only. When wording is in 'child speak' credit must be given. At this level, it is sometimes necessary to interpret what the candidate has written in order to give credit for what the candidate knows and understands.</p>		
Level 1:	The candidate has a basic but possibly confused grasp of ideas. Few correct examples are given to illustrate points made. This candidate does not have a clear idea of what s/he is talking about.		
Level 2:	The candidate has some knowledge but there will be less clarity of understanding. Some correct examples given to illustrate points made. This candidate knows what s/he is talking about but is confused in part.		
Level 3:	The candidate has a thorough understanding of the issues and has provided relevant examples to support the knowledge shown. This candidate knows what s/he is talking about.		

- 1 (a) Describe two ways in which designers have used recycled textile materials in their designs.**

Candidate is expected to describe the way in which designers have used recycled materials. There may be a description of one or more key pieces or the way in which materials have been re-used, e.g. used plastic bottles to make new fabrics, used fabric / component from one product to make a new one, appliqué using fabric from old product to decorate a new one. This is not about environmental issues, e.g. use of natural dyes.

**1 mark for each point to be considered plus 1 mark for each acceptable detail or example.
2 ways, 2 marks each.**

(4 marks)

- (b) Explain two problems of using recycled materials to make new textile products.**

E.g. irregular / limited supply, cost of disassembly to get usable materials, materials may not fit design ideas, fabric may be too worn / dirty, not as strong.

Any two appropriate problems.

(2 marks)

- (c) Some new fashions are designed to look 'old'.
Describe two ways in which products are made to look 'old'.**

E.g. ripped and torn, distressing of fabric, frayed edges, faded colour. Use of vintage components, overdyeing of fabrics, bleaching, stonewashing, old-fashioned styles, adding patches, creasing.

Any two appropriate reasons, 1 mark each.

(2 marks)

- (d) Give two reasons why someone would buy a 'one-off' design.**

E.g. product made from more expensive materials, may have hand stitching / decoration, better quality components, individual / unique design, could be a collector's item.

2 acceptable reasons, 1 mark each.

(2 marks)

Total for question 10 marks

2 (a) You have been asked to show your design ideas.

**(i) Use pencil to draw and label two different ideas for your product.
Marks will be given for**

- **originality of ideas.**
- **quality of notes and sketches.**

Originality of ideas

Ideas should be for different products or show significant differences in decoration/shape if similar products.

If the candidate presents two essentially identical products with only minor differences, the max is 1 mark for the second design.

Weak unimaginative idea presented. Little detail shown, or may be for decoration or product only.

1 mark each.

A quality design with some attempt to be imaginative.

May be a 'tried and tested' design with attempt to give it a new twist.

2 marks each.

A quality design with strong evidence of originality. It will be clear what is intended.

3 marks each.

Quality of notes and sketches

Work presented lacks clarity, may be sketch only, and may lack care in presentation.

Notes add little extra information, may be simple labelling.

1 mark each.

Work presented with care, notes will add clarity to sketches.

2 marks each.

(10 Marks)

- (ii) **Choose one of your design ideas for development.
Give two reasons why your chosen design idea will sell well.**

Candidate is expected to evaluate suitability of two features of the selected design idea for designer market. Reference may be made to style, use of decoration, and components as appropriate.

Marks awarded as follows:

Simple statements, e.g. 'it looks special'
1 mark.

More detailed statements with example, e.g. 'the use of antique lace together with the recycled denim and new buttons will appeal to those who like to look different.'
2 features, 2 marks each.

(4 marks)

- (b) **Use sketches, labelling and notes to present a final design for your product.
You must show a front and back view.
If you have chosen a fashion garment you may use the body outline shapes to help you.
Marks will be given for:**

- **use of recycled fabrics, textile products or components**

Level 1: Little indication, of which fabrics are recycled, may be used inappropriately. May appear that recycled fabrics have not been used. Components may be inappropriate or over-used.
1 – 2 marks.

Level 2: Clear use of theme of recycled fabric but may not be most interesting or appropriate for product. Candidate will not have explored possibilities and design may be a copy of an existing product which has been modified slightly. Components clearly used but may lack sparkle.
3 – 4 marks.

Level 3: Thoughtful and / or imaginative use of recycled fabric and components, probably more than one, which is totally appropriate for product. Work will have little evidence that an existing design has been copied. Must give indication of main fabric for full marks, and have evidence of the origin of the recycled materials.
5 – 6 marks.

- **originality and quality of the design**

The following should be considered:

Modern, original and imaginative design, balanced composition / effective use of space, effective proportions, appropriate for intended use, will the design work? Use of decorative techniques and components which are in keeping with the fabrics selected – use of components may be functional and / or decorative. Suitability of product for limited designer range.

Marks awarded as follows:

Level 1: Lack of detail, unimaginative design which may not be appropriate, may not clearly relate to spec, poor use of space, design is uncoordinated.

1 – 2 marks.

Level 1 / 2: Unimaginative design with some thought given to intended end use. Relates to most areas of the spec but may not be clear, overall balance is weak. Decoration / components added as an afterthought.

3 – 4 marks.

Level 2: Sound design relates to all aspect of spec with clear detail about product – this may be inappropriate in places. The candidate has tried to be imaginative and the design is likely to be popular. Overall composition may be weak but there will be some areas of originality. There may be some lack of clarity about decoration / components. Just lacks the 'wow' factor.

5 – 6 marks.

Level 2 / 3: Product will be modern and likely to sell well. Design clearly relates to all aspects of the spec. High quality and imaginative design for product, suitable for limited designer range. The design has the 'wow' factor.

7 – 8 marks.

- **use of colour.**

This is not about colouring in of the design idea. The following should be considered: how has the colour been used? Are the colours toning, contrasting, complementary? Do they work for the product? Do they promote a feeling of nostalgia?

Marks awarded as follows:

Level 1: Colour is immature and not used to effect.
(1 mark)

Level 2: Choice is used well but does not make product exciting.
(2 marks)

Level 3: Used effectively / imaginatively, mature and sensitive choice.
(3 marks)

- **presentation**

Level 1: Lack of care in presenting work, candidate will not communicate detailed information about product.
(1 mark)

Level 2: Candidate has taken care with presentation and labelling and most information about product is clear.
(2 marks)

Level 3: Well presented showing clear detail of product which will include extra information, e.g. an expanded view, labelling is clear and there is clear communication as to what is intended. Back view **must** be included.
(3 marks)

(20 marks)

Total for question 34 marks

- 3 (a)(i) **The design brief asks you to decorate the product.
Name one decorative technique you have chosen.**

E.g. appliqué, embroidery, including stitchery and beadwork, printing, dyeing, decorative use of components, cut work, patchwork, pleats and tucks if used as decoration rather than just construction..

Not pockets, belts, felting – but **use** of felt is acceptable.

(1 mark)

- (ii) **Explain why you think it is suitable.**

Reference may be made to style of product, suitability for fabric used, appeal to target market, safety issues, cost in relation to target market / manufacture.

Marks awarded as follows:

Simple statements, e.g. 'It looks nice.'

1 mark.

More detailed statements, e.g. 'The appliqué allows a lot of fabric scraps to be recycled so the design is in keeping with the theme.'

2 – 3 marks.

(3 marks)

- (b) **Use notes and diagrams to explain how to work the technique named in part (a). Include information about materials and equipment that will be needed.**

Clear details of how to work the decorative technique named in (a).
Notes and / or diagrams may be used.

Marks awarded as follows:

Level 1: Very basic detail with little explanation of process.

Explanation is confused. This candidate displays little knowledge and is unable to explain method.

1 – 2 marks.

Level 2: Basic detail, explanation of process adequate and would mostly achieve desired effect. This candidate has a good grasp of method.

3 – 4 marks.

Level 3: Detailed explanation of process which would achieve desired result. Candidate understands and can clearly explain method.

Accurate information about materials and equipment needed.

5 – 6 marks.

(6 marks)

Total for question 10 marks

- 4 (a) **Explain each statement in the table below.**
Pesticides used on cotton plants damage the environment.

E.g. because they pollute streams, rivers, atmosphere, land.

Not animal / human welfare.

(1 mark)

Polyester fabrics are a problem if thrown away in landfill sites.

E.g. because they do not bio degrade/break down, stay there for hundreds of years.

(1 mark)

Buying components overseas causes environmental damage.

E.g. because they use up fuel to transport them.

Not takes away jobs, local environment in country of manufacture.

(1 mark)

Dyeing fabrics can be bad for the environment.

E.g. because effluent can pollute rivers and streams. Uses a lot of water.

Not toxic fumes.

(1 mark)

(4 marks)

- (b) **Many textiles products are packaged before going to the shops.**

- (i) **Give two reasons why products are packaged.**

To protect them, to display them, to provide information, ease of transportation, marketing function.

Any two appropriate reasons, 1 mark each.

(2 marks)

- (ii) **Give two reasons why some packaging is not environmentally friendly.**

E.g. use of paper, use of plastic packaging, use of printing inks, use of energy to produce packaging and wrap products, problems associated with disposal.

Any two appropriate reasons, 1 mark each.

(2 marks)

- (iii) **The symbol shown below is often found on packaging (recycling symbol).**

Explain what this symbol means.

Recycling symbol (1 mark), packaging can be recycled (1 mark), packaging has been recycled (1 mark).

Must refer to packaging, not product in the packaging.

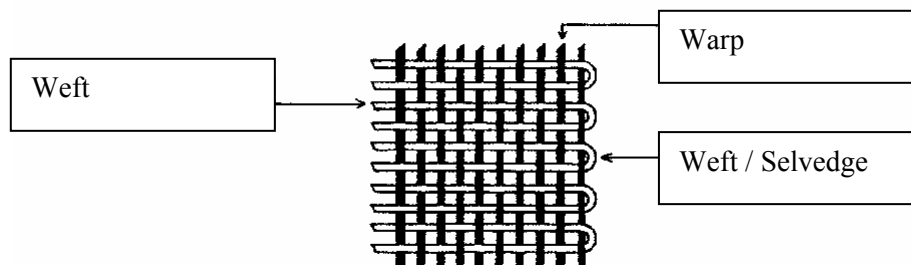
Any two appropriate reasons, 1 mark each.

(2 marks)

Total for question 10 marks

- 5 (a) Label each of the following correctly in the boxes shown below..

Warp, weft and selvedge correctly labelled.



1 mark each.

(3 marks)

- (b) The design has been printed on to the fabric.

- (i) Explain two ways a fabric designer uses Computer Aided Design (CAD).

E.g. use of digital camera / scanner to collect images, use of paint programmes, ability to manipulate designs / colours, 'virtual reality' samples. 1 mark for each point to be considered plus 1 mark for each acceptable detail.

2 ways, 2 marks each.

(4 marks)

- (ii) Explain two ways a fabric manufacturer uses Computer Aided Manufacture (CAM).

E.g. design taken direct from computer to printer, digital printing, computerized control of screen making, accurate placement of colour blocks. Allow embroidered fabric. 1 mark for each point to be considered plus 1 mark for each acceptable detail.

2 ways, 2 marks each.

(4 marks)

- (iii) Give two quality control checks that will be needed when printing this fabric.

E.g. accurate placement of each colour, no 'bleeding' or smudging of colours, print incomplete.

Any two appropriate QC checks, 1 mark each.

(2 marks)

Total for question 13 marks

6 (a) These are the stages that will be needed in order to manufacture this cushion.

(i) Complete the chart below to show the order in which the cushion can be put together using the stages in the box above.

Suggested order or work: (Cutting out given as a starting point)

1 join coloured squares together	2. sew seam at back of cushion
sew seam at back of cushion	sew in zip
sew in zip	join coloured squares together
attach flower motifs	join front and back together
join front and back together	attach flower motifs

NB Other orders may work as well and should be given credit.
1 mark for each correct step in the process.

(5 marks)

(ii) Give one quality control check that will be needed at each stage.

E.g. the following quality control checks:

Cut out fabric pieces: Are edges straight? Accurate sizing? Cut on correct grain? Pieces same size?

Join coloured squares together: Are squares accurately matched? Stitching straight? Accurate seam widths? Correct tension?

Sew seam at back of cushion: Accurate seam width? Correct length opening for zip?

Sew in zip: Centred over opening? Accurate placement? Stitching even?

Attach flower motifs: Correct position? Securely / neatly attached?

Join front and back together: Cushion is correct size? Stitching straight? Correct tension? Corners square?

Any 1 appropriate QC check for each stage of manufacture, 1 mark each.

NB In stage of manufacture, mark until seriously wrong, but continue to give credit for QC and likely problems.

(6 marks)

- (b) Give two reasons why it is important to carry out quality control checks.**

E.g. to prevent waste, to produce high quality goods / fewer rejects, improved reputation, to ensure next stage of manufacture runs smoothly, reference to safety issues.

Any 2 appropriate reasons, 1 mark each.

(2 marks)

- (c) Some parts of the cushion will be made as a sub-assembly.**

- (i) What is meant by a sub-assembly?**

A separate line or unit of manufacture, partly made / make first then attach to product.

(1 mark)

- (ii) Identify one part of the cushion which could be made on a sub-assembly line.**

E.g. sewing front squares, zip application, making flower motifs.

(1 mark)

- (d) Give two ways manufacturers can make it safer for the workers using the bandsaw / bandknife.**

E.g. use of chain-mail gloves to reduce risk of cuts, breathing masks to reduce inhalation of dust, use of steel toe shoes as heavy rolls of fabric could drop on to feet, safety stop buttons, safety guard, proper training in use of machine, regular maintenance of machine.

1 mark for each for any 2 acceptable points.

(2 marks)

- (e) The design of the cushion has been changed. The new design is shown below.**

- (i) Give two ways in which the new cushion will be cheaper to manufacture.**

No squares so less stitching, reduced fabric costs, less thread used, quicker to manufacture, more efficient use of fabric when only one used.

Not 'cheap'.

Any 2 appropriate ways, 1 mark each.

(2 marks)

- (ii) Give two explanations of how this would help in the manufacture of the new cushion.**

E.g. pattern templates can be re-used, workers already familiar with manufacture/quicker to manufacture, no need for new prototype to check shape/size, layouts / machines already programmed.

Any 2 appropriate reasons, 1 mark each plus 1 mark for each explanation of reason.

(4 marks)

- (f) Fill in the chart below to show the materials needed to make 10 cushions.**

5 metres / 500cms of fabric. (1 mark)

10 zips. (1 mark)

20 flower motifs. (1 mark)

(3 marks)

- (g) (i) Give two reasons why it is important to have a good stock control system.**

E.g. so don't run out of stock, prevent hold-ups in manufacturing, no stockpiling of materials as it costs money.

Any 2 appropriate reasons, 1 mark each

(2 marks)

- (ii) Explain how ICT (Information Communication Technology) can help with stock control in a factory.**

E.g. reference to JIT automated ordering which saves warehouse cost, use of spreadsheets, use of barcodes, more efficient than manual methods. Can refer to finished products.

Any 2 appropriate ways, 1 mark each, plus 1 mark for acceptable detail.

(4 marks)

Total for question 32 marks

7 (a) The fabric is made from 100% cotton.

- (i) Give three detailed reasons why this is a suitable fabric for a cushion.**

E.g. hardwearing, does not require special care, strong, soft on skin, absorbent so can be dyed / printed on / comfortable against skin / does not develop static.

Not 'cheap', recyclable.

Any 3 appropriate qualities, 1 mark each plus 1 mark for acceptable detail

3 qualities, 2 marks each.

(6 marks)

- (ii) Name one fabric finish which could make a cotton fabric better for the cushion.**

E.g. crease resistant, flame retardant, Teflon / stain resistant, brushing.

Not colourfast.

(1 mark)

- (iii) Explain one advantage of this fabric finish.**

E.g. cotton creases badly (**1 mark**), so finish keeps cushion looking good (**1 mark**), cotton highly flammable (**1 mark**), legal requirement for furnishing (**1 mark**), cotton easily absorbs stains (**1 mark**), keeps cushion clean (**1 mark**).

(2 marks)

- (b) The symbols shown below are on a label attached to the cushion. Explain the use of each symbol on this cushion.**

- (i) Symbol 1**

Wash (**1 mark**), at 40 (**1 mark**),
reduced mechanical action (**1 mark**)
2 points, 1 mark each

(2 marks)

- (ii) Symbol 2**

Iron (**1 mark**), with hot iron (**1 mark**)

(2 marks)

- (iii) Symbol 3**

Do not bleach.

(2 marks)

- (iv) Symbol 4**

100% cotton / QA mark. (**1 mark**)

(1 mark)

Total for question 16 marks

Total for paper 125 marks