



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Secondary Education

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

Full Course Higher 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 the 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 the work of one of these designers or companies.

This question is about recycling **textiles**, not environmental awareness.

Candidate is expected to describe the work of a **textile** designer who specializes in using recycled materials, e.g. Saunders and Seager, Miguel Androver, Deborah Lindquist, Yoshitake.

Some companies specialise in recycling materials, eg junky styling, company which uses tyre inner tubes to make bags, use of rice bags (hessian) to make new products,

Not high street shops.

It is expected that there will be a description of one or more key pieces, including reference to style, materials, colour, and decorative techniques as appropriate. There may also be information about how and where work is exhibited and who buys the products.

Mark awarded as follows:

Level 1: Little information given, the candidate will be confused and not provide clear detail of any aspect of a designer's work.

1 mark.

Level 2: There is some credible information about a particular designer's work but this will be limited and not tell a full story. There may not be examples of particular products to illustrate points.

2 – 3 marks.

Level 3: Clear and detailed information about a particular designer's work with appropriate examples to illustrate the style and type of product designed. It is likely that the candidate will name the designer / company.

4 marks.

(4 marks)

(b) Some new fashions are designed to look 'old'. Describe three ways in which new fashion 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 three appropriate ways, 1 mark each.

(3 marks)

(c) 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, 1 mark each.

(2 marks)

Total for question 9 marks

- 2 (a) (i) Use pencil to draw and label two different ideas for your product. Marks will be awarded as follows:**

- **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**

Qualities 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**

Work presented with care, notes will add clarity to sketches. **2 marks (10 marks)**

- (ii) Explain how your chosen design will sell well as part of a designer's limited range of products.**

Candidate is expected to evaluate suitability of selected design idea for limited designer range. Reference may be made to style, use of decoration, fabrics, 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 – 3 marks. (3 marks)

(b) Use sketches, labelling and notes to present a final design for your product.

Final design for product to include:

Use of recycled fabrics

Level 1: Little indication, of which fabrics are recycled, may be used inappropriately. May appear that recycled fabrics have not been used. i.e. 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 mark

Level 3: Thoughtful and / or imaginative use of recycled fabric and components, probably more than one, which are 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 design.

The following should be considered:

Modern, original and imaginative design, balance 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 fabric 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 spec but may not be clear, overall balance weak. Decoration / components added as an afterthought.

3 – 4 mark.

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 spec. High quality and imagination 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 are 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 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 33 marks

3 (a) (i) 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).

Clear details of how to work the decorative technique named in (i).
Notes and / or diagrams 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 the 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.

5 – 6 marks.

(6 marks)

Total for question 10 marks

4 Explain three changes which could be made to your design so that it could be manufactured in quantity.

Candidate should describe appropriate changes needed for the product so that it could be mass produced. These might include changes to style, decorative effects, fabrics and components used, methods of assembly.

Marks awarded as follows:

Simple explanation with little detail given, comments will lack clarity and possibly not be effective.

1 mark.

Clearer explanation with some detail and / or reasons for changes. May not be most appropriate change to make or would change original design idea radically.

2 marks.

Clear explanation with detailed reason for changes. Method selected will make appropriate and realistic changes without losing too much of the original design idea.

3 marks.

3 changes, up to 3 marks each.

(9 marks)

Total for question 9 marks

5 Describe ways in which the manufacture and use of textiles can damage the environment.

This question is **not about animal/human welfare.**

The response may include: growing cotton involves use of pesticides / fertilisers which can pollute ground and waterways, atmosphere, dyeing and finishing processes use vast amounts of water, effluent can pollute waterways if not cleared before disposal, heavy metals used in production of components, especially zips, disposal of waste fabrics and components fill land sites, use of diesel / petrol in transporting materials to factories, use of energy to power factories, cleaning of textile products can waste energy and produce polluting effluent.

Marks awarded as follows:

Level 1: Very basic information with limited number of points. Explanation is confused and there will be many inaccuracies.
1 – 2 marks.

Level 2: Sound information covering a range of issues and which is mostly accurate. Points may cover a number of areas superficially or may cover a few in some detail.
3 – 5 marks.

Level 3: Sound and accurate information covering a range of issues. Candidate will be informed and information will be accurate and up-to-date.
6 – 8 marks.

(8 marks)

Total for question 8 marks

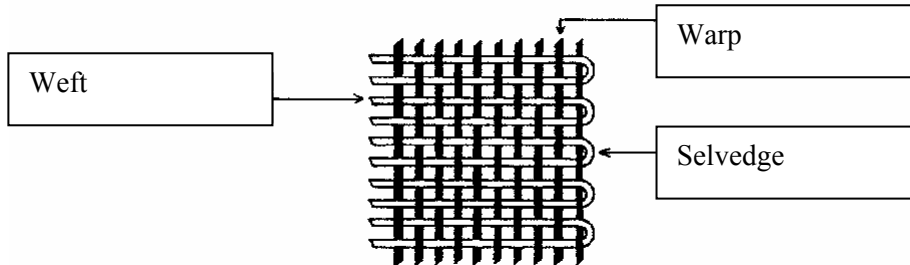
6 (a) (i) What is the name of this weave?

Plain (Tabby) weave.

(1 mark)

(ii) Label each of the following correctly in the boxes shown below.

Warp, weft and selvedge correctly labelled.



1 mark each.

(3 marks)

(iii) Give two features of this weave which makes the fabric suitable for printing onto.

Provides smooth finish, no pattern to interrupt print, same both sides, strong fabric.

Do not allow 'no stretch', 'does not have gaps'.

Any two appropriate points, 1 mark each.

(2 marks)

(b) Briefly describe one industrial printing method which could be used to put the pattern on the fabric shown on the insert sheet.

E.g. screen printing, including rotary screen, roller printing, sublimation printing, digital printing. The candidate may refer to block printing, but care needs to be taken to ensure that a commercial, rather than a classroom practice, is being described. **(1 mark)**

Details of how process works. **(2 marks)**

(3 marks)

- (c) (i) **Explain how Computer Aided Design (CAD) can be used to produce a print design.**

E.g. use of digital camera / scanner to collect images, use of paint programmes, ability to manipulate designs / colours, 'virtual reality' samples, improved accuracy, time efficient.

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 clearly how CAD could be used to produce print design.

1 mark.

Level 2: Basic detail, explanation of process adequate and mostly accurate. This candidate has a good grasp of one method but provides limited examples or shows confusion when attempting to describe processes.

2 – 3 marks.

Level 3: Detailed explanation of CAD with clear and accurate examples. Candidate understands and can clearly explain how CAD could be used to produce print design.

4 marks.

(4 marks)

- (ii) **Explain how Computer Aided Manufacture (CAM) can be used to produce a printed fabric.**

E.g. design taken direct from computer to printer, digital printing, computerized control of screen making, accurate placement of colour blocks.

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 clearly how CAM could be used to produce print design.

1 mark.

Level 2: Basic detail, explanation of process adequate and mostly accurate. This candidate has a good grasp of one method but provides limited examples or shows confusion when attempting to describe processes.

2 – 3 marks.

Level 3: Detailed explanation of CAM and clear and accurate examples. Candidate understands and can clearly explain how CAM could be used to produce print design.

4 marks.

(4 marks)

- (d) **The manufacturers will need to take care when making products from this fabric. Explain why.**

E.g. treat as 'one way' design, considered placement of motifs, care when matching design.

1 mark for each point to be considered, plus 1 mark for acceptable detail or two points, 1 mark each.

(2 marks)

Total for question 19 marks

7 (a) Complete the chart below to

(i) show the stages of manufacture to make this cushion,

Suggested orders of work:

1. cut out fabric pieces

join front pieces together

hem back opening edges

make buttonholes

sew on buttons

join front and back together

2. cut out fabric pieces

hem back opening edges

make buttonholes

sew on buttons

join front pieces together

join front and back together

NB Other orders may work as well and should be given credit.

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

(6 marks)

- (ii) show one quality control check that will be needed at each stage, (6 marks)
- (iii) explain a problem that might occur if the quality control check is not carried out at each stage. (6 marks)

(i) Stage of manufacture (6 marks)	(ii) Quality control check (6 marks)	(iii) Problem that might occur (6 marks)
Cut out fabric pieces. (1 mark)	Are pieces cut straight? On correct grain? Pieces same size? Edges straight? (1 mark)	Uneven appearance. Cushions twists in use. (1 mark)
Join front piece together. (1 mark)	Stitching straight? Correct tension? Accurate seam widths? (1 mark)	Uneven appearance. Front and back do not fit together. (1 mark)
Hem back opening edges. (1 mark)	Accurate hem width? Stitching straight? (1 mark)	Uneven appearance. Poor finish. (1 mark)
Make buttonholes. (1 mark)	Evenly spaced? Correct length? In straight line? (1 mark)	Poor appearance. Buttons do not go through hole. (1 mark)
Sew on buttons (1 mark)	Correct position? Securely attached? (1 mark)	Will not match buttonholes. Will come off – could be a danger. (1 mark)
Join front and back together (1 mark)	Cushion is correct size? Corners square? Straight stitching? Tension correct? (1 mark)	Out of tolerance, seconds product. Poor quality finish. Pad may not fit? (1 mark)

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

A separate line or unit of manufacture.

(1 mark)

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

E.g. sewing front squares, buttonhole / button application, making front and back separately.

(1 mark)

(iii) Give two reasons why sub-assembly is used in industrial manufacture.

E.g. to enable use of specialist machinery, to use specially trained machinists, to save money on buying expensive equipment, speeds up manufacture, fewer manufacturing faults.

Any two appropriate reasons, 1 mark each.

(2 marks)

Total for question 22 marks

8 (a) (i) Evaluate the suitability of this 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.

But it creases badly, shrinks, is highly flammable, takes a long time to dry, is easily stained, attacked by mildew.

Not 'cheap', recyclable.

Marks awarded as follows:

Level 1: Very basic detail with limited number of qualities. Explanation is confused and there will be many inaccuracies. Points tend to describe positive qualities and there will be little, if any, true evaluation.

1 – 2 marks.

Level 2: Sound detail of a range of qualities which is most accurate. Points tend to describe positive qualities and there will be little, if any, evaluation.

3 – 5 marks.

Level 3: Sound and accurate detail of a range of qualities. Points must describe both positive and negative qualities and there will be some true evaluation.

6 – 7 marks.

(7 marks)

(ii) Explain how using a blend of polyester and cotton would change the properties of the fabric.

E.g. Blending with polyester adds crease resistance (**1 mark**), makes fabric less likely to shrink (**1 mark**), and less absorbent so it dries quicker (**1 mark**), adds strength (**1 mark**), allows for heat setting (**1 mark**), but fabric very flammable (**1 mark**).

Any four points, 1 mark each

(4 marks)

(b) Explain the use of each symbol on this cushion.

Symbol 1: Safety warning / legal requirement (**1 mark**), cotton is highly flammable (**1 mark**).

Symbol 2: 100% cotton (**1 mark**), QA mark (**1 mark**).

(4 marks)

Total for question 15 marks

Total for paper 125 marks
