



ASSESSMENT and  
QUALIFICATIONS  
ALLIANCE

**General Certificate of Secondary Education**

**Design and Technology  
(Textiles Technology) 3557**

**Short Course Higher Tier**

**Mark Scheme**

*2007 examination - June series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

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<b>QuNo</b>	<b>Response to be awarded credit</b>	<b>Mark</b>	<b>Total</b>
<b>NB</b>	<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 answers which are equally valid <b>they must be given full credit.</b></p> <p>Many responses at this level are assessed according to the <b>quality</b> of the work rather than the number of points included. The following level descriptors are intended to be a guide when assessing the quality of a candidate's response.</p>		
<b>Level 1:</b>	<p>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.</p>		
<b>Level 2:</b>	<p>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.</p>		
<b>Level 3:</b>	<p>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.</p>		

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

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 one problem which might be caused by 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 appropriate problem.

**(1 mark)**

- (c) Describe two ways in which using recycled fabrics can make products more individual.**

E.g. individual colour ways, mix of fabric / textile / patterns, wear pattern of fabric.

**1 mark for each acceptable detail  
2 ways, 2 marks each**

**(4 marks)**

**Total for question 9 marks**

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

**Originality of ideas ( 2 x 3 marks ).**

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.**

**(6 marks)**

**Quality of notes and sketches ( 2 x 2 marks ).**

Work presented lacks clarity 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.**

**(4 marks)**

- (ii) Explain how your chosen design idea 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.**

**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 are totally inappropriate for product. Work will have little evidence that an existing design has been copied.

**5-6 marks.**

**originality and quality of the design including decoration**

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 be 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 weak. Decoration / components added as an afterthought.

**3-4 marks.**

**Level 2:** Sound design related to all aspects of spec with clear detail about product – this may be inappropriate in places. Design lacks some imagination but is likely to be popular. Overall composition may be weak. There may be some lack of clarity about decoration / components. Just lacks the ‘wow’ factor.

**5-6 marks.**

**Level2 / 3:** product will be modern and likely to sell well. Design clearly related to all aspects of 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 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 the 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. about back view or other, labelling is clear and there is clear communication about what is intended. Back view **must** be included.  
( 3 marks )

**Total for question 33 marks**



**3 (a) Name the decorative technique you have used.**

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)**

**(b) 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)**

**Total for question 4 marks**

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

Candidate should describe appropriate changes needed to 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 reasons for change. Method selected will make appropriate and realistic changes without losing too much of original design idea.

**( 3 marks )**

**(6 marks)**

**Total for question 6 marks**

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

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

E.g. growing cotton involves use of pesticides / fertilisers which can pollute ground and waterways, dyeing and finishing processes use vast amounts of water, effluent can pollute waterways if not cleaned before disposal, heavy metals used in production of components, especially zips, disposal of waste fabrics and components fills 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.

**1 mark for each point to be considered plus 1 mark for each acceptable detail.**

**2 ways, 2 marks each.**

**(4 marks)**

**Total for question 4 marks**

- 6 (a) **Briefly describe one industrial printing method which could be used to produce the fabric shown.**

E.g. screen printing, roller printing.

**( 1 mark )**

Detail of how process works.

**( 2 marks )**

**(3 marks)**

- (b) **Explain one quality control check that will be needed when printing this fabric.**

E.g. accurate placement of each colour / motif, no 'bleeding' of colour.

Identification of appropriate QC check. **( 1 mark )**

Explanation of need / how it will be carried out. **( 1 mark )**

**(2 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, computerised 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 with clear and accurate examples. Candidate understands and can clearly explain hoe CAM could be used to produce print design.  
**4 marks.**

**(4 marks)**

**Total for question 13 marks**

- 7 (a) **Complete the chart below to show the stages of manufacture to make this cushion,**

Suggested order of work:

- |                                  |                                  |
|----------------------------------|----------------------------------|
| <b>1.</b> Cut out fabric pieces. | <b>2.</b> Cut out fabric pieces. |
| Join front pieces together.      | Hem back opening edges.          |
| Hem back opening edges.          | Make buttonholes.                |
| Make buttonholes.                | Sew on buttons.                  |
| Sew on buttons.                  | Join front pieces together.      |
| Join front and back together.    | Join front and back together.    |

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

**(6 marks)**

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

**(i) Order of manufacture**

**(ii) Quality control check**

Cut out fabric pieces  
( 1 mark )

Are pieces cut straight? On straight grain?  
Pieces same size?  
Edges straight? ( 1 mark )

Join front pieces together  
( 1 mark )

Stitching straight? Correct tension?  
Accurate seam widths? ( 1 mark )

Hem back opening edges.  
( 1 mark )

Accurate hem width? Stitching straight?  
( 1 mark )

Make buttonholes.  
( 1 mark )

Evenly spaced? Correct length?  
In a straight line? ( 1 mark )

Sew on buttons.  
( 1 mark )

Correct position? Securely attached?  
( 1 mark )

Join front and back together.  
( 1 mark )

Cushion is correct size? Corners square?  
Straight stitching? Tension correct?  
( 1 mark )

**(6 marks)**

- (b) (i) **What are tolerance levels?**

Upper and lower  
( 1 mark )

Limits within which products must be manufactured.  
( 1 mark )

**(2 marks)**

**(c) (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 that could be made on a sub-assembly line.**

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

**(2 marks)**

**(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 20 marks**

- 8 (a) **The fabric is made from 100% cotton.  
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, can be 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 mostly accurate. Points tend to describe positive qualities and there will be little, if any, true evaluation.  
**3 – 5 marks.**

**Level 3:** Sound and accurate detail of a range of qualities. Point describes both positive and negative qualities and there will be some true evaluation.  
**6 – 7 marks.**

**(7 marks)**

- (b) **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)**

**Total for question 11 marks**

**Total for paper 100 marks**