



**General Certificate of Secondary Education**

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

**Short Course Foundation 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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QuNo	Response to be awarded credit	Mark	Total
<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 other answers which are equally valid <b>they must be given full credit.</b></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>		
<b>Level 1:</b>	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.		
<b>Level 2:</b>	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.		
<b>Level 3:</b>	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 one way in which designers have used recycled textile materials in their designs.**

Candidate is expected to describe one 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 acceptable detail.**

**(2 marks)**

- (b) Explain one problem 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 appropriate problem.**

**(1 mark)**

- (c) Some new fashions are designed to look 'old'. Describe two 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 two appropriate ways, 1 mark each.**

**(2 marks)**

**Total for question 5 marks**

- 2 (a) (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) Give one reason why your chosen design idea will sell well.**

Candidate is expected to evaluate suitability of one feature 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 statement, 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 marks**

**(2 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. 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 recycled materials.

**5 – 6 marks.**

## **Originality and Quality of 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 2:** Sound design related to most aspects of the 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. Product may have some weaknesses.

**3 – 4 marks.**

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

**5 – 6 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**

#### **Marks awarded as follows:**

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

**Level 2:** Candidate has taken care with presentation, 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 as to what is intended. Back view **must** be included.  
**( 3 marks )**

**(18 marks)**

**Total for question      30 marks**



**3 (a) (i) Name the 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 marks )**

**(3 marks)**

**(b) (i) Describe a component you have used.**

E.g. pearl buttons, open-ended zip, blue beads, iron-on Vilene.

**1 mark for identifying component, 1 mark for detail.**

**Any appropriate component.**

**(2 marks)**

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

Points should evaluate suitability of component selected for end product.

**Marks awarded as follows:**

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

**( 1 mark )**

More detailed statements with example, e.g. 'the blue beads add sparkle and draw attention to the faded blue denim.'

**( 2 marks )**

**(2 marks)**

**Total for question      8 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 )**

**(3 marks)**

**(b) (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) 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.

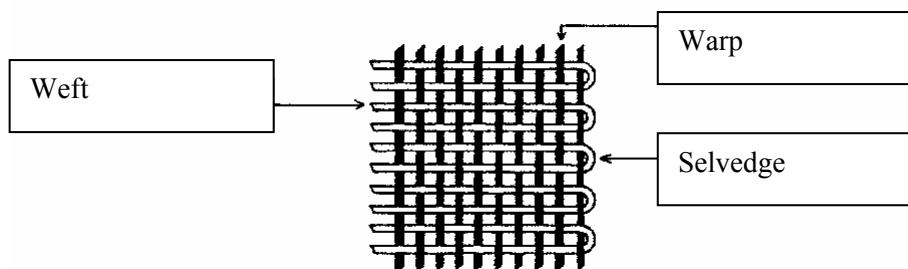
**Any two appropriate reasons, 1 mark each.**

**(2 marks)**

**Total for question 9 marks**

**5 (a) Label each of the boxes below with the correct word.**

Warp, weft and selvedge correctly labelled.



**1 mark for each.**

**(3 marks)**

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

**2 ways, 2 marks each.**

**(4 marks)**

**(iii) Give one quality control check that will be needed when printing this fabric.**

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

**Any one appropriate QC check.**

**(1 mark)**

**Total for question 12 marks**

- 6 (a) (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 orders of 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:

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

**(5 marks)**

- (b) (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)**

- (c) 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)**

- (d) 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)**

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

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

**10 zips. ( 1 mark )**

**20 butterfly motifs. ( 1 mark )**

**(3 marks)**

- (f) Explain the dangers for workers of each of the problems below.**

**rubbish piled up near factory exits**

- (i)**

E.g. fire hazard, prevents quick exit in case of emergency, trip hazard.

**Any 2 appropriate points, 1 mark each, or 1 mark for a point to be considered plus 1 mark for acceptable detail.**

**(2 marks)**

- (ii) a cracked electric plug and fraying flex on a sewing machine**

E.g. both problems can lead to electrocution, especially if touched with wet hands, frayed flex may have bare wires exposed.

**Any 2 appropriate points, 1 mark each, or 1 mark for a point to be considered plus 1 mark for acceptable detail.**

**(2 marks)**

**(iii) untrained operators using fork lift trucks in the warehouse**

E.g. could run into someone or piled up stock, truck may topple, may not be aware of how to stop truck in emergency.

**Any 2 appropriate points, 1 mark each, or 1 mark for a point to be considered plus 1 mark for acceptable detail.**

**(2 marks)**

**Total for question    25 marks**

- 7 (a) (i) **Give two 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 2 appropriate points, 1 mark each, or 1 mark for a point to be considered plus 1 mark for acceptable detail.**

**(4 marks)**

- (ii) **Name one fabric finish which could make the 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) **Explain the use of each symbol on this cushion.**

- (i) **Symbol A**

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

**(2 marks)**

- (ii) **Symbol B**

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

**(2 marks)**

**Total for question 11 marks**

**Total for paper 100 marks**