

GCSE

**Specimen Papers and Mark Schemes**

**Edexcel GCSE  
Design & Technology: Textiles Technology  
Full course (1971)**

**For First Examination  
Summer 2003**

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**Autumn 2000**

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**Attempt ALL questions in the spaces provided.**

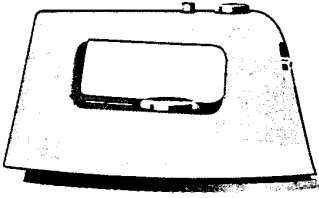
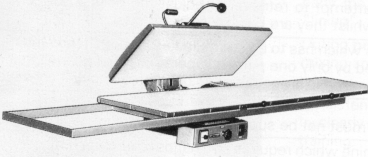
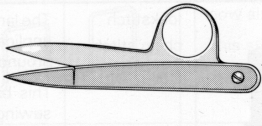
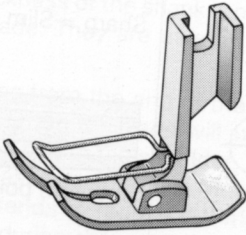

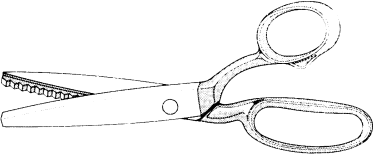
*Leave blank*

1. The table below shows either some items of textiles tools or components or equipment.

(a) Complete the table by:

- (i) naming each tool or component or equipment;
- (ii) describing its use.

The first one is done for you.

TOOLS/COMPONENTS/ EQUIPMENT	NAME	USE
	Iron	Used for pressing seams during production
		
		
		
		
		

**(10)**

(b) The iron can be used at different temperatures. In the space below, draw the symbol that you would expect to find in a pair of jeans to help with the ironing of the product.

(2)

(c) When using electrical equipment, safety is very important.

Give **three** safety rules you should follow when using electrical equipment.

1 .....

2 .....

3 .....

(3)

(d) Pressing is an important part of the construction process.

Explain **two** reasons why pressing is an important part of the construction process.

1. ....

.....

2. ....

.....

(4)

(e) Fabric performance can be improved with the use of a crease-resistant finish.

Give **one** example of a fabric which has a crease-resistant finish added to it and explain how this is achieved.

Example .....

Explanation.....

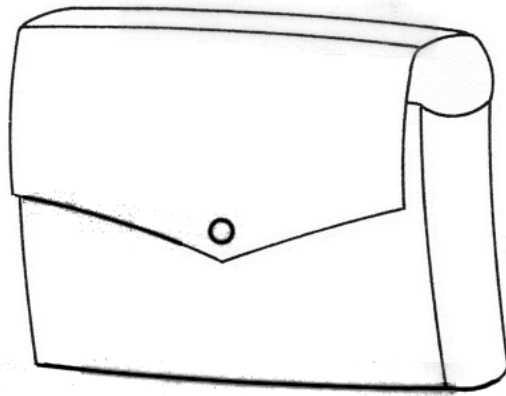
.....

.....

(3)

(Total 22 marks)

2. The clutch bag sketched below is produced for the evening wear market. It is made from cotton fabric.



(a) Give **two** reasons for using cotton to make this bag.

1. ....

2. ....

(2)

(b) The manufacturer had decided to change the appearance of the fabric by using colour.

(i) Name **three** different methods of colouring cotton fabric.

1. ....

2. ....

3. ....

(3)

(ii) Choose **one** method from your answer to (b)(i) and explain, using notes and sketches, the stages of applying the colour to the cotton fabric.

(6)



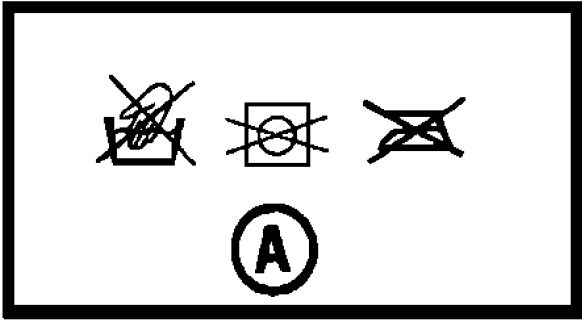
(c) Give **three** advantages to the manufacturer of using a CAD package when developing the initial design idea of the clutch bag.

- 1 .....
- 2 .....
- 3 .....

(3)

(d) The clutch bag needs to be cleaned to maintain its appearance.

Look at the label below and explain each of the symbols illustrated.



- .....
- .....
- .....
- .....

(4)

(e) Explain **two** ways in which the introduction of technology in the textiles industry has affected employment.

- 1. ....
- .....
- 2. ....
- .....

(4)

(Total 22 marks)

3. A company is designing a swimming bag to carry both dry clothing and wet kit.

The specification for the product is that it must:

- resemble a cartoon character;
- fasten securely;
- retain the moisture of the wet kit;
- be mass produced.

- (a) In the spaces below, use notes and sketches to show **two** ideas for the design of the swimming bag which meets this specification.

**DESIGN IDEA 1**

**DESIGN IDEA 2**

*Leave  
blank*

**(8)**

*Leave  
blank*

(b) Three of the specification points are listed below.

Use each of the headings to evaluate **one** of your designs against the initial specification.

Fasten securely.

.....  
.....  
.....  
.....

Retain the moisture of the wet kit.

.....  
.....  
.....  
.....

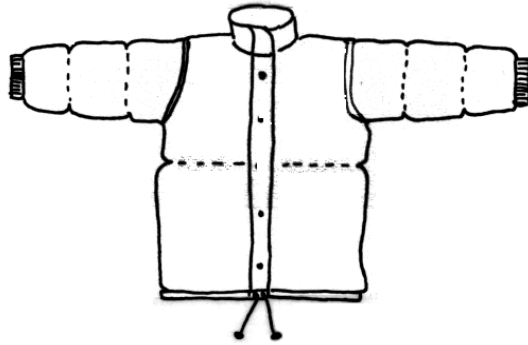
Be mass-produced.

.....  
.....  
.....  
.....

**(6)**

**(Total 22 marks)**

4. The diagram below shows a child's winter jacket.



**ADDITIONAL INFORMATION**

The jacket is quilted.  
The sleeves are elasticated.  
It is designed for children aged 5-8 years.

(a) Two specification points for the jacket are:

- it must keep the user warm;
- it must keep the user dry.

Give **three** more points of specification which could be included in the specification for this garment. For each point, give a reason why it should be included.

1 .....

Reason .....

2 .....

Reason .....

3 .....

Reason .....

**(6)**

(b) Give **three** specific fibres which would be suitable for making this garment.

1 .....

2 .....

3 .....

**(3)**

(c) Give **one** property associated with **one** of the fibres you have named in (b) and explain how this property makes it suitable for this garment.

Property .....

Explanation.....

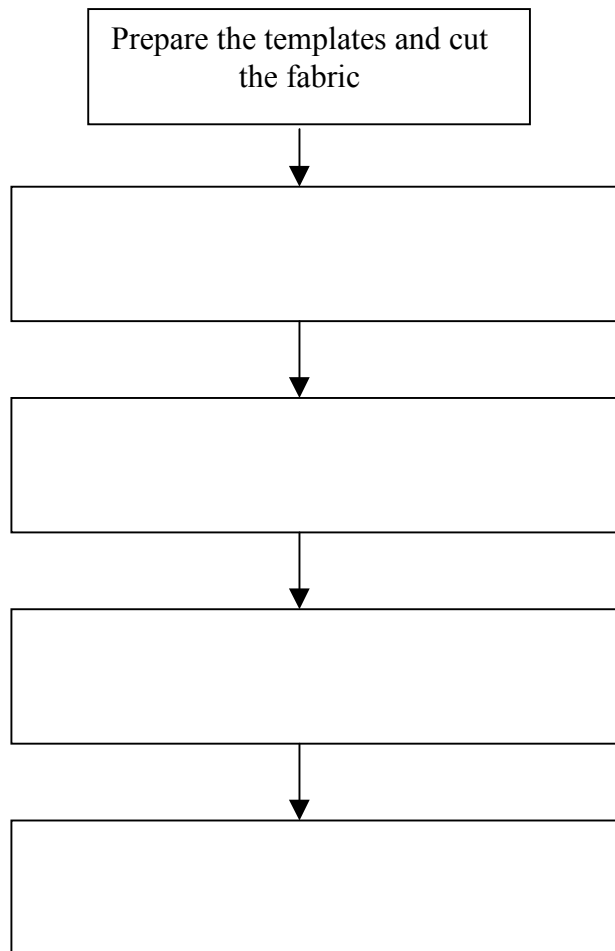
.....  
.....

(4)

(d) The jacket is to be mass-produced.

Complete the diagram below to show the main stages of the production process.

The first stage has been done for you.



(5)

(e) The purpose of this product is to protect against the winter weather.

*Leave blank*

Describe how this jacket fulfils its purpose.

.....

.....

.....

.....

.....

.....

**(4)**

**(Total 22 marks)**

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**PAPER TOTAL 88 MARKS**

**END**

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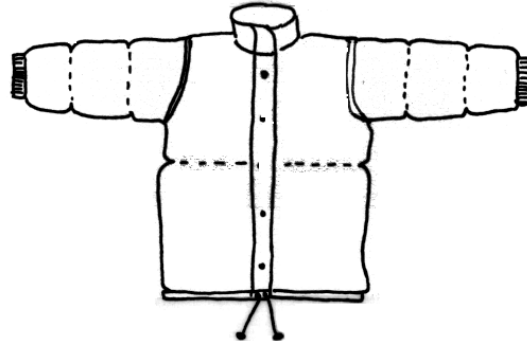




Attempt ALL questions in the spaces provided.

Leave blank

1. The diagram below shows a child's winter jacket.



**ADDITIONAL INFORMATION**

The jacket is quilted.  
The sleeves are elasticated.  
It is designed for children aged 5-8 years.

(a) Two points of specification for the jacket are:

- it must keep the user warm;
- it must keep the user dry.

Give **three** more points of specification which could be included in the specification for this garment. For each point, give a reason why it should be included.

1 .....

Reason .....

2 .....

Reason .....

3 .....

Reason .....

**(6)**

(b) Give **three** specific fibres which would be suitable for making this garment.

1 .....

2 .....

3 .....

**(3)**

(c) Give **one** property associated with **one** of the fibres you have named in (b) and explain how this property makes it suitable for this garment.

Property .....

Explanation.....

.....

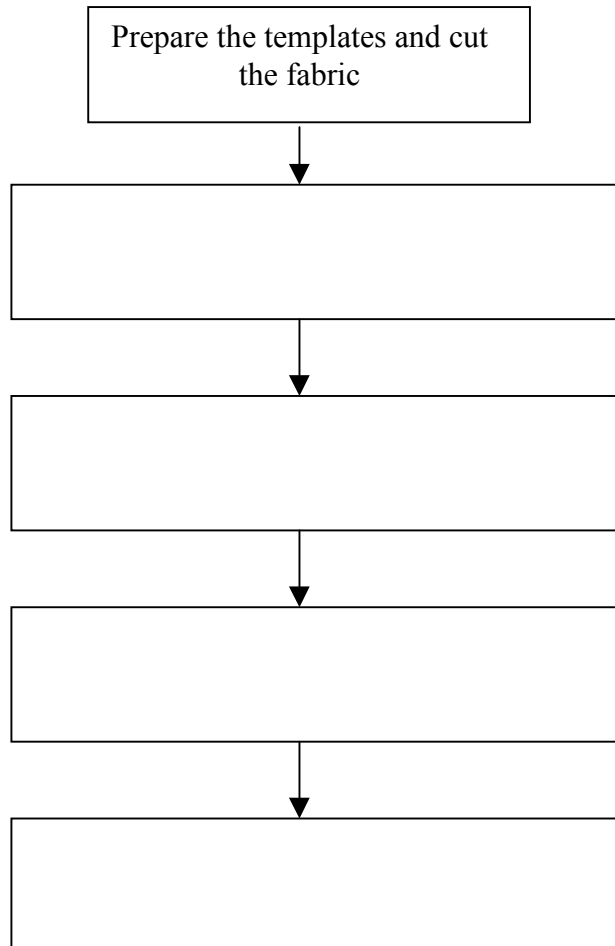
.....

(3)

(d) The jacket is to be mass-produced.

Complete the diagram below to show the main stages of the production process.

The first stage has been done for you.



(5)

(e) The purpose of this product is to protect against the winter weather.

Describe how this jacket fulfils its purpose.

.....

.....

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.....

.....

.....

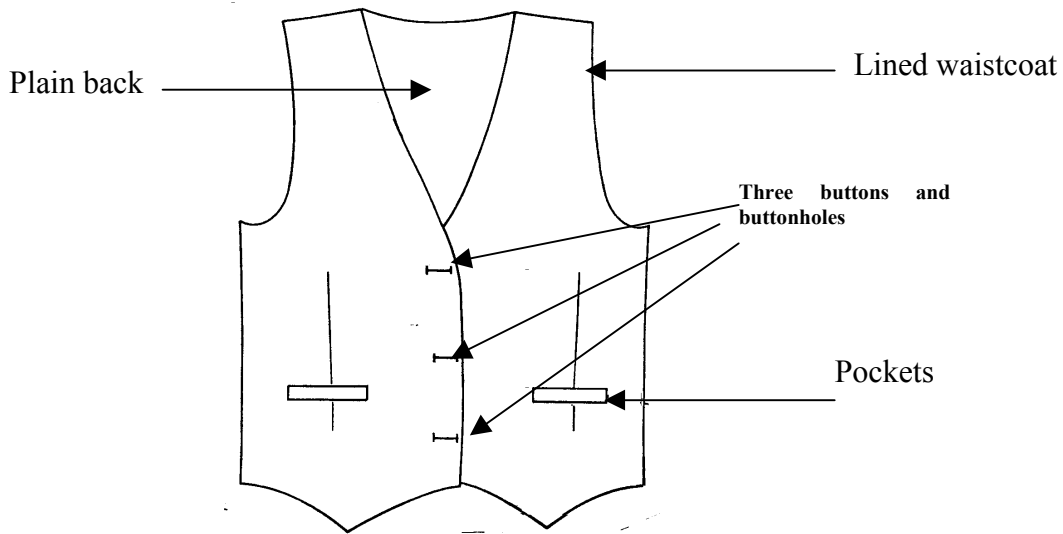
**(4)**

**(Total 22 marks)**

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*Leave  
blank*

2. The waistcoat illustrated below is to be constructed in a school classroom.



(a) Choosing the correct equipment to cut out the pattern pieces is important. A student could use cutting out shears or pinking shears.

Give an advantage of using each piece of equipment and justify your answer.

Cutting out shears .....

Justification.....

Pinking shears.....

Justification.....

(4)

(b) The waistcoat could also be batch produced in a factory.

Explain how CAD and CAM would be used to ensure efficient working practice in the design and cutting out of the pattern pieces.

.....  
.....  
.....

**(4)**

(c) In the space below, draw the pattern pieces needed to make the waistcoat and add the commercial pattern markings to indicate the following:

- straight grain;
- seam allowance;
- buttons and buttonholes.

**(6)**

(d) The waistcoat is to be produced in a checked fabric. The fabric must ensure a quality finish for the checked waistcoats.

Explain **two** points that must be considered when cutting the pattern pieces from the checked fabric to ensure a quality finish.

1 .....

2 .....

**(4)**

(e) The quality of the buttonholes must be high.

Explain **two** quality points that the manufacturer must consider to ensure high quality when producing the button holes.

1 .....

2 .....

**(4)**

**(Total 22 marks)**

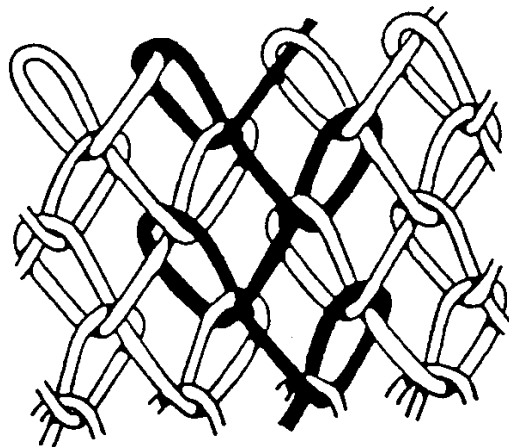
3. Knitted fabric is widely used in today's clothing market.

(a) (i) Describe **three** qualities of weft knitted fabrics that make them suitable for clothing products.

- 1 .....
- .....
- 2 .....
- .....
- 3 .....
- .....

(6)

(ii) Look at the diagram below of a warp-knitted fabric.



Explain **one** advantage that warp-knitted fabrics have over weft knitted fabrics.

- .....
- .....
- .....
- .....

(3)



(iii) Use notes and sketches to show the construction of weft knitted fabrics

*Leave  
blank*

(2)

(b) Lifestyles have changed in recent years with many people exercising or swimming.

Explain **three** reasons why manufacturers use elastane fibres to produce swimwear.

1 .....

.....

2 .....

.....

3 .....

.....

(6)

(c) Describe how the media and the fashion industry influence consumers' choices.

.....

.....

.....

.....

.....

.....

.....

.....

(5)

**(Total 22 marks)**

4. A company is designing a small bag to carry a mobile phone.

The specification for the bag is that it must:

- hold the phone securely;
- protect the phone;
- be easy to clean;
- be mass-produced.

- (a) In the spaces below use notes and sketches to show **two** ideas for the design of the bag which meets this specification.

**DESIGN IDEA 1**

**(8)**


**DESIGN IDEA 2**

*Leave  
blank*

**(8)**



**DESIGN AND TECHNOLOGY: TEXTILES TECHNOLOGY (1971/2F)**  
**FULL COURSE FOUNDATION TIER MARK SCHEME**

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
1	(a)	(i)	Name: Flat-bed press Name: Snippers Name: Presser foot Name: Quick unpick Name: Pinking shears	5x1	
		(ii)	Use: Large flat-bed press with lid that is lowered to create pressure Use: Small blades that open automatically, with a hole for the thumb Use: The presser foot is attached to sewing machine, with hole in centre for sewing Use: To remove machine stitching or to cut button holes Use: To provide a zig-zag edge when cutting	5x1	(10)
	(b)		Iron symbol Correct number of spots  	1 1	(2)
	(c)		Unplug when not in use Check state of flex Use the correct fuse	3x1	(3)
	(d)		Explanation which makes reference to: Relax fabric, reduce shrinkage, remove wrinkles and creases before cutting and sewing, improve easiness and accuracy of sewing	2x2	(4)
	(e)		cotton, linen or viscose, rayon	1	
			The fabric is treated with a synthetic resin which coats the surface. This then resists creases	2	(3)
					(22)

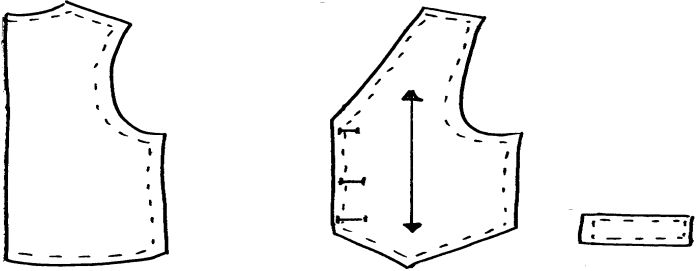
Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
2	(a)		Any 2 appropriate reasons	2x1	(2)
	(b)	(i)	Screen printing; tie dye; resist dye; silk printing	3x1	(3)
		(ii)	<p>Tie and dye – marble effect; stripper and pleats circles; square tied patterns. One of the oldest methods of dyeing cloth. Areas of fabric are tied with thread and immersed in dye. The tightness of the thread resists the dye and prevents it penetrating to the tied areas. (resist dye)</p> <p>Batik – originated in Java by hand. Now adapted for machines. Areas of fabric are covered in wax removed by heat. Where wax has cracked during process is repeated for each colour.</p> <p>Screen Printing: A type of stencilling by hand and machine. The screens are the width of the fabric and the length of the pattern repeat. The screens are covered with silk, organdy, nylon or glass fibre. Designs are transferred by photographic method. Colour is forced through mesh by a squeegee; each colour uses a different screen. The dye is heat set.</p> <p>Silk painting: Patterns are applied to silk using a gutta pen, which puts down a resistant outline. The spaces are then filled with silk paint which spreads across the fabric. The paint is heat set.</p>	6x1	(6)
	(c)		<p>Ease of changing design or colouring</p> <p>Increasing/ decreasing size</p> <p>Economy of scale – use of fabric</p>	3x1	(3)
	(d)		<p>Do not wash</p> <p>Do not iron</p> <p>Do not bleach</p> <p>Dry clean in all solvents</p>	4x1	(4)
	(e)		<p>Explanation which makes reference to:</p> <p>Increase of machinery/computerised functions</p> <p>Reduction in employees</p> <p>Reduction in salary bills</p> <p>Increase in profit margins</p>	2x2	(4)
					(22)



Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
	(e)		Points could include: Quilting provides additional warmth Elasticated cuffs provide additional warmth Hood protects head Front fastening/ drawstring add to warmth	2x2	(4)
					(22)
			<b>TOTAL FOR PAPER 88 MARKS</b>		





Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
2.	(a)		Cutting out shears – long blades ∴ long straight cuts; will tackle thick and fine fabric + justification Pinking shears – finishes edge; help to prevent fraying even when shape can find difficulty cutting knitted fabrics + justification	1+1  1+1	(4)
	(b)		Explanation which makes reference to: Use CAM to cut many layers of fabric at the same time/reduces production time Use CAD to assist in economical use of fabric/reduce design time/reduces waste	2x2	(4)
	(c)		Pattern pieces Pattern markings	3x1 3x1	(6)
			 <p>Back                                      Front                                      Pocket flap</p>		
	(d)		1. Ensuring the straight grain is maintained so that the checks remain straight OR 2. To ensure checks match at key points e.g. front fastenings	2x2	(4)
	(e)		Explanation which makes reference to: Correct size for buttons. Close satin stitch to avoid fabric fraying Cut accurately – not cutting sewing threads Use good quality thread	2x2	(4)
					(22)

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
<b>3</b>	<b>(a)</b>	<b>(i)</b>	Ability to stretch and regain shape; comfortable – moulds to shape; Warmth – air trapped ∴ makes them warmer; Retains shape when washed	<b>3x2</b>	<b>(6)</b>
		<b>(ii)</b>	Warp knitted will not fray or ladder because the warp threads are interlocked by knitting sideways	<b>3x1</b>	<b>(3)</b>
		<b>(iii)</b>	Diagram which clearly shows features/construction of weft knitted fabric	<b>2x1</b>	<b>(2)</b>
	<b>(b)</b>		Explanation which makes reference to: Used to make lightweight fabrics; high elasticity; dry easily; will provide firm structure which stretches; Fabric so close fitting it had improved swimmer's performance	<b>3x2</b>	<b>(6)</b>
	<b>(c)</b>		The need to be thin; toned body; move away from "starved" look. Must be tall; Always chasing something you are not; Glamorous models; Consumer attempting to achieve this "look"	<b>5x1</b>	<b>(5)</b>
					<b>(22)</b>
<b>4</b>	<b>(a)</b>		<b>DESIGN IDEA 1</b> Each point of specification resolved in design (fully = 2, partly = 1)	<b>4x2</b>	<b>(8)</b>
			<b>DESIGN IDEA 2</b> Each point of specification resolved in design (fully = 2, partly = 1)	<b>4x2</b>	<b>(8)</b>
	<b>(b)</b>		Each point clearly evaluated (fully = 2, partly = 1)	<b>3x2</b>	<b>(6)</b>
					<b>(22)</b>
			<b>TOTAL FOR PAPER 88 MARKS</b>		

**DESIGN & TECHNOLOGY: TEXTILES TECHNOLOGY (1971)  
SPECIFICATION GRID**

<b>PAPER 2F</b>				
<b>Quest</b>	<b>Assessment objective tested</b>	<b>Content covered by question</b>	<b>Question style/type</b>	<b>Marks</b>
1	AO1	Preparing, processing and finishing materials and manufacturing commercial products	Structured question on a theme.	<b>Total 22</b>
2	AO1 + AO3	Classification and selection of materials and components. Design and market influence, parts (i) and (ii) not covered in question 3.	Structured question on a theme.	<b>11 + 11 Total 22</b>
3	AO2	Design question. This question accounts for <b>all</b> 10% of designing marks.	Design question – candidates design a product from a specification and evaluate against the specification.	<b>Total 22</b>
4	AO3	Design and market influence, part (iii).	Product analysis – candidates are asked to analyse a product following the analysis process.	<b>Total 22</b>
<b>PAPER 2H</b>				
<b>Quest</b>	<b>Assessment objective tested</b>	<b>Content covered by question</b>	<b>Question style/type</b>	<b>Marks</b>
1	AO3	Design and market influence, part (iii).	Product analysis – candidates are asked to analyse a product following the analysis process.	<b>Total 22</b>
2	AO1	Preparing, processing and finishing materials and manufacturing commercial products	Structured question on a theme.	<b>Total 22</b>
3	AO1 + AO3	Classification and selection of materials and components. Design and market influence, parts (i) and (ii) not covered in question 3.	Structured question on a theme.	<b>11 + 11 Total 22</b>
4	AO2	Design question. This question accounts for <b>all</b> 10% of designing marks.	Design question - candidates design a product from a specification and evaluate against the specification.	<b>Total 22</b>

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