General Certificate of Education January 2007 Advanced Subsidiary Examination

ACCAL ASSESSMENT and QUALIFICATIONS ALLIANCE

DESIGN AND TECHNOLOGY: PRODUCT DESIGN PD1T (TEXTILES)

Unit 1 Materials and Components

Wednesday 10 January 2007 9.00 am to 10.30 am

For this paper you must have:

- a lined answer book (AB08) which is provided separately
- normal writing and drawing instruments
- a colour Insert Sheet (enclosed).

Time allowed: 1 hour 30 minutes

Instructions

- Use blue or black ink or ball-point pen. Use pencil and coloured pencils only for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is PD1T.
- Answer **three** questions. Answer Question 1 and **two** other questions.
- Use the Insert Sheet included to help you answer Question 1 and Question 2.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 100. Four of these marks will be awarded for using good English, organising information clearly and using specialist vocabulary where appropriate.
- There are 40 marks for Question 1 and 28 for each of Questions 2 to 4.

Advice

• Illustrate your answers with sketches and/or diagrams wherever you feel it is appropriate.

Answer Question 1.

1	Study the photograph of the coat (Figure 1) shown on the Insert Sheet. The coat is made from a 100% wool fabric with a raised nap.				
	(a)	(i)	Explain what is meant by the term raised nap.	(3 marks)	
		(ii)	Explain in detail the properties of this woollen fabric which make it suitable for a coat.	(7 marks)	
		(iii)	What are the drawbacks of using this woollen fabric to make a coat?	(4 marks)	
	(b) The coat is lined with a polyester satin fabric.				
		(i)	Describe the structure of a satin fabric. You may use a diagram.	(4 marks)	
		(ii)	Explain why polyester satin fabric is suitable for lining this coat.	(5 marks)	
		(iii)	Explain the reasons for lining this coat.	(6 marks)	
	(c)	Som	e parts of the coat will be interfaced.		
		(i)	Name two different parts of the coat which will have interfacing.	(2 marks)	
		(ii)	Explain the reasons why interfacing is needed in these parts of the coat. $(2$	×3 marks)	
	(d)	Eval	uate the suitability of the buttons used on the coat.	(3 marks)	

Answer any **two** questions from 2, 3 and 4.

2 Study the photograph of the red patterned fabric (Figure 2) on the Insert Sheet. (a) What is the name of this type of fabric? (1 mark)(i) (ii) Name two different ways in which this patterned effect can be achieved on a fabric. (2 marks) (b) This fabric could be used to make an evening dress. Name a fibre which could be used. (i) (1 mark)(ii) Explain why the fibre you have named is suitable. (5 marks) (c) This fabric could also be used to make a skirt for everyday wear. Name a fibre which could be used. (1 mark) (i) (ii) Explain why the fibre you have named is suitable. (5 marks) (d) Using notes and diagrams, explain the ways in which a designer could maximise the effect of this fabric in garment design. (6 marks) (e) The full repeat of the pattern shown in **Figure 2** is 20 cm square. Explain the problems when designing and making products from this type of fabric.

(7 marks)

Turn over for the next question

3	Fibres are produced in either staple or filament form.				
	(a)	(i) What is the basic difference between staple and filament fibres?	(2 marks)		
		(ii) Name two <i>different</i> staple fibres.	(2 marks)		
		(iii) Name two <i>different</i> filament fibres.	(2 marks)		
	(b)	(b) Fibres are converted into yarns in order to make them into fabrics.Using one example, explain the basic process of converting a staple fibre into yarns			
	(c) Compare the main qualities that a staple yarn gives to a fabric with those give by a filament yarn.		n (4 marks)		
	(d)	Fibres are often blended to make yarns.			
		(i) Name three specific examples of blended yarns.	(3 marks)		
		 (ii) For each of the examples you have named in part (i), explain the reasons blending these fibres. (3) 	for $\times 4$ marks)		
4	Knitted fabrics are popular for a range of applications.				
	 (a) (i) Explain the main differences in construction between a warp knit and a weft You may use diagrams. 		veft knit. (6 marks)		
		 (ii) Describe the different qualities given to a fabric by these two types of kn construction. 	iit (6 marks)		
	(b)	What will a designer/manufacturer need to consider when choosing components for a product made from a knitted fabric? (4 mar			
	(c)	Giving examples, explain the reasons why:			
		(i) knitted fabrics are often used for winter garments	(4 marks)		
		(ii) knitted fabrics are frequently used for sportswear	(4 marks)		
		(iii) garments made from knitted fabrics are easy to pack.	(4 marks)		

END OF QUESTIONS

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Q U A L I F I C A T I O N S A L L I A N C E

Design and Technology: Product Design (Textiles) Unit 1 Materials and Components

PD1T

Insert

For use with Questions 1 and 2

Figure 1

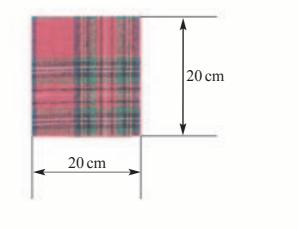








The full repeat of this pattern is 20 cm square.



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