UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the November 2004 question paper

9705 DESIGN AND TECHNOLOGY

9705/01 Paper 1 (Written 1), maximum raw mark 120

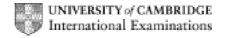
This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the Report on the Examination.

• CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2004 question papers for most IGCSE and GCE Advanced Level syllabuses.



Grade thresholds taken for Syllabus 9705 (Design and Technology) in the November 2004 examination.

	maximum	minimum mark required for grade:			
	mark available	А	В	E	
Component 1	120	78	71	40	

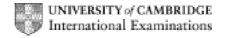
The thresholds (minimum marks) for Grades C and D are normally set by dividing the mark range between the B and the E thresholds into three. For example, if the difference between the B and the E threshold is 24 marks, the C threshold is set 8 marks below the B threshold and the D threshold is set another 8 marks down. If dividing the interval by three results in a fraction of a mark, then the threshold is normally rounded down.

GCE A AND AS LEVEL

MARK SCHEME

MAXIMUM MARK: 120

SYLLABUS/COMPONENT: 9705/01 DESIGN AND TECHNOLOGY Written 1



Page 1	Mark Scheme	Syllabus	Paper
	DESIGN AND TECHNOLOGY – NOVEMBER 2004	9705	1

Section A

1	(a)	Tools and equipment identified up to 2 Process explained up to 2	4	
	(b)	Tools and equipment identified up to 2 Process explained up to 2	4	8
2	(a)	Three fuels correctly named 3 x 1	3	
	(b)	Three energy sources correctly named 3 x 1	3	
	(c)	Two forms of energy correctly named 2 x 1	2	8
3	Siz Sec	ocess explained up to 3 e of holes determined up to 2 ctional view up to 2 ality and clarity of communication 1	8	8
4	(a)	Some details of process 1 Good details of process 2-3 Full details of process 4 Quality and clarity of communication 1	5	
	(b)	Each feature identified 2 x 1 Quality and clarity of communication 1	3	8
5	(a)	Some understanding of ductility shown 1 Good understanding of ductility shown 2 Full understanding of ductility shown 3	3	
	(b)	Basic sketching techniques used showing limited details of an appropriate test. Some knowledge of equipment required 0-2		
		Sketching of good quality showing most details of the test. Good knowledge of equipment required 3-4		
		Excellent sketching techniques showing all details of the test. Full knowledge of equipment required 5	5	8

Total mark for Section A 40

Page 2	Mark Scheme	Syllabus	Paper
	DESIGN AND TECHNOLOGY – NOVEMBER 2004	9705	1

Section B

20

				DESIGN AND TECHNOLOGY – NOVEMBER 2004	9705	1
	(c)	atta	achment			
				ty sketching used to show good details about how the sign tached 3-4		
			cellent sk ached 5	ketching showing full details about how the sign could be	5	20
8	(a)		•	astic named 1 oriate reasons given 2 x 1	3	
	(b)	4-5 6 p	stages of lus stage	tages identified 1 correctly identified 2 es correctly identified 3 er of work up to 2	5	
	(c)	(i)		ketching used to show some details about how the hole be made 0-2		
				ketching used to show good details about how the hole be made 3-4		
				nt sketching used to show full details about how the hole be made 5	5	
		(ii)	Basic sk	ketching used to give some details about how the bends		

Good sketching used to show good details about how the bends

Excellent sketching which gives full details about how the bends

Mark Scheme

Page 3

would be made 0-2

would be made 3-4

would be made 5

(iii) Process described up to 2

Total mark for Section B 40

5

2

20

Syllabus

Paper

	Page 4	Mark Scheme	Syllabus	Paper
Ī		DESIGN AND TECHNOLOGY – NOVEMBER 2004	9705	1

Section C

9	(a)	Explanation up to 2	2	
	(b)	Appropriate joint named 1	1	
	(c)	Explanation up to 2	2	
	(d)	Advantages/disadvantages identified up to 4 Critical discussion of issues up to 3	7	
	(e)	Suitable materials identified 2 x 1	2	
	(f)	Advantages/disadvantages identified up to 3 Critical discussion of issues up to 3	6	20
10	(a)	Mechanism named 1	1	
	(b)	Power source given 1	1	
	(c)	(i) Properties explained up to 2	2	
		(ii) Thermoplastic named	1	
	(d)	(i) Advantages/disadvantages identified up to 3 Critical discussion of issues up to 2	5	
		(ii) Advantages/disadvantages identified up to 3 Critical discussion of issues up to 2	5	
		(iii) Advantages/disadvantages identified up to 3 Critical discussion of issues up to 2	5	20
11	(a)	Suitable plastic named 1 Suitable process named 1	2	
	(b)	Advantages/disadvantages identified up to 2 Critical discussion of issues up to 2	4	
	(c)	Three hazards identified 3 x 1 Critical discussion of issues up to 3	6	
	(d)	Ergonomic factors identified up to 4 Critical discussion of issues up to 4		

Total mark for Section C 40