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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.

e thresholds take mber 2004 examir	n for Syllabus nation.	9705 (Design	and Technolo	egy) in the	PapaCambri
	maximum	minimum	mark required	for grade:	Sec.
	mark available	А	В	E	9111
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.

November 2004



GCE A AND AS LEVEL

MARK SCHEME

MAXIMUM MARK: 120

SYLLABUS/COMPONENT: 9705/01

DESIGN AND TECHNOLOGY

Written 1

			42		1	
ŀ	Page 1	Mark Scheme DESIGN AND TECHNOLOGY – NOVEMBER 20	004 32	Paper 1		
		Section A	3	baCambrid		
(a)	Tools and e Process exp	equipment identified up to 2 plained up to 2	4	39	e.con	
(b)	Tools and e Process ex	equipment identified up to 2 plained up to 2	4	8		
(a)	Three fuels	correctly named 3 x 1	3			
(b)	Three energ	gy sources correctly named 3 x 1	3			
(c)	Two forms	of energy correctly named 2 x 1	2	8		
Pro Siz See Qu	ocess explain e of holes de ctional view τ ality and clar	ned up to 3 etermined up to 2 up to 2 rity of communication 1	8	8		
(a)	Some detai Good detail Full details Quality and	ils of process 1 ls of process 2-3 of process 4 l clarity of communication 1	5			
(b)	Each featur Quality and	re identified 2 x 1 I clarity of communication 1	3	8		
(a)	Some unde Good under Full underst	erstanding of ductility shown 1 rstanding of ductility shown 2 tanding of ductility shown 3	3			
(b)	Basic sketc appropriate	ching techniques used showing limited details of a test. Some knowledge of equipment required 0-2	n 2			
	Sketching o Good know	of good quality showing most details of the test. /ledge of equipment required 3-4				
	Excellent sl Full knowle	ketching techniques showing all details of the test edge of equipment required 5	5	8		
	Total mark for Section A					

				2
Page 2			Mark Scheme DESIGN AND TECHNOLOGY – NOVEMBER 2004	Paper 1
				200
				°C3,
			Section B	76th
(a)	Sui	table wo	.9e	
Two reaso			s given 2 x 1	3 01
(b)(i)		Basic sł requirec	etching used to show some understanding of the formers	
		Good qu formers	uality sketching used to show a good understanding of the required 3-4	
		Exceller required	nt sketching used to show full details of the formers I 5-6	6
	(ii)	Basic sł 0-2	etching used to show some understanding of the process	
		Good qı process	uality sketching used to show a good understanding of the 3-4	
		Exceller	nt sketching used to show full details of the process 5-6	6
(c)	Ba: joir	sic sketcl iing meth	ning used to show some details about an appropriate od 0-2	
	Go joir	od quality ing meth	y sketching used to show good details about an appropriate od 3-4	e
	Exc joir	cellent sk ling meth	etching used to show full details about an appropriate od 5	5 20
(a)	Sui Tw	table me o reason	tal named 1 s given 2 x 1	3
(b)	(i)	Basic sł would b	etching used to show some details about how the pattern e made 0-2	
		Good qu pattern	uality sketching used to show good details about how the would be made 3-4	
		Exceller pattern	nt sketching used to show full details about how the would be made 5-6	6
	(ii)	Basic sl	ketching used to show some details about the process 0-2	
		Good qu process	uality sketching used to show good details about the 3-4	
		Exceller process	nt sketching used to show full details of the casting 5-6	6
	(a) (b)((c) (a) (b)	 (a) Sui Two (b)(i) (ii) (c) Bas join (ii) (c) Bas join (c	 (a) Suitable wor Two reason (b)(i) Basic sk required Good qu formers Exceller required (ii) Basic sk 0-2 Good qu process Exceller (c) Basic sketch joining meth Good quality joining meth Good quality joining meth Excellent sk joining meth Suitable me Two reason (b) (i) Basic sk would b Good qu pattern sk (ii) Basic sk Good qu pattern sk Good qu 	DESIGN AND TECHNOLOGY – NOVEMBER 2004 Section B (a) Suitable wood named 1 Two reasons given 2 x 1 (b)(i) Basic sketching used to show some understanding of the formers required 0-2 Good quality sketching used to show a good understanding of the formers required 3-4 Excellent sketching used to show full details of the formers required 5-6 (ii) Basic sketching used to show some understanding of the process 0-2 Good quality sketching used to show a good understanding of the process 3-4 Excellent sketching used to show full details of the process 5-6 (c) Basic sketching used to show some details about an appropriate joining method 0-2 Good quality sketching used to show good details about an appropriate joining method 5 (a) Suitable metal named 1 Two reasons given 2 x 1 (b) (i) Basic sketching used to show some details about an appropriate joining method 5 (a) Suitable metal named 1 Two reasons given 2 x 1 (b) (i) Basic sketching used to show some details about how the pattern would be made 0-2 Good quality sketching used to show some details about how the pattern would be made 3-4 Excellent sketching used to show some details about how the pattern would be made 5-6 (ii) Basic sketching used to show some details about thow the pattern would be made 5-6 (iii) Basic sketching used to show some details about the process 0-2

F	Page	3	Mark Scheme	32	Pape
	3-		DESIGN AND TECHNOLOGY – NOVEMBER 2004	".D	1
				2	Jaca,
(c)	Ba: atta	sic sketc achment	hing used to show some details about a method of 0-2		170
	Go cou	od qualit uld be att	y sketching used to show good details about how the sign ached 3-4		
	Exe atta	cellent sk ached 5	etching showing full details about how the sign could be	5	20
(a)	Su Tw	itable pla o approp	stic named 1 riate reasons given 2 x 1	3	
(b)	At 4-5 6 p Co	least 3 st 5 stages (lus stage rrect orde	ages identified 1 correctly identified 2 es correctly identified 3 er of work up to 2	5	
(c)	(i)	Basic sl would b	ketching used to show some details about how the hole be made 0-2		
		Good sl would b	ketching used to show good details about how the hole he made 3-4		
		Excelle would b	nt sketching used to show full details about how the hole he made 5	5	
	(ii)	Basic sl would b	ketching used to give some details about how the bends be made 0-2		
		Good sl would b	ketching used to show good details about how the bends be made 3-4		
		Exceller would b	nt sketching which gives full details about how the bends he made 5	5	
	(iii)	Process	s described up to 2	2	20
			Total mark for Sec	tion B	40

	C	2000	1	Mark Schome	42	Paper
	Faye 4			DESIGN AND TECHNOLOGY – NOVEMBER 2004	Nº.D	1
				Section C		DaCamp.
				Section C		Tig
9	(a)	Exp	olanatior	n up to 2	2	50.00
	(b)	Ар	oropriate	e joint named 1	1	177
	(c)	Exp	olanatior	n up to 2	2	
	(d)	Adv Crit	vantages tical disc	s/disadvantages identified up to 4 cussion of issues up to 3	7	
	(e)	Sui	table ma	aterials identified 2 x 1	2	
	(f)	Adv Crit	vantages tical disc	s/disadvantages identified up to 3 cussion of issues up to 3	6	20
10	(a)	Me	chanism	named 1	1	
	(b)	Pov	wer sour	ce given 1	1	
	(c)	(i)	Propert	ties explained up to 2	2	
		(ii)	Thermo	oplastic named	1	
	(d)	(i)	Advanta Critical	ages/disadvantages identified up to 3 discussion of issues up to 2	5	
		(ii)	Advanta Critical	ages/disadvantages identified up to 3 discussion of issues up to 2	5	
		(iii)	Advanta Critical	ages/disadvantages identified up to 3 discussion of issues up to 2	5	20
11	(a)	Sui Sui	table pla table pro	astic named 1 ocess named 1	2	
	(b)	Adv Crit	vantages tical disc	s/disadvantages identified up to 2 cussion of issues up to 2	4	
	(c)	Thr Crit	ree haza tical disc	rds identified 3 x 1 cussion of issues up to 3	6	
	(d)	Erg Crit	jonomic tical disc	factors identified up to 4 cussion of issues up to 4	8	20

Total mark for Section C 40