## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

## MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

## 9705 DESIGN AND TECHNOLOGY

9705/12

Paper 1, maximum raw mark 120

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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

CIE is publishing the mark schemes for the October/November 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

	raye z		Mark Scheme, reachers version	Syllabus	Paper	
			GCE A/AS LEVEL – October/November 2010	9705	12	
1	`´ e.g	itable sheet material named . mild steel, stainless steel, aluminium itable reason related to strength and/or ease of maintenance/cleaning/finishing				[2]
	(b) (i)	Usin	ing of template described g template described ills of tools, equipment and safety precautions (if nece	ssary)	(0-2) (0-2) (0-2)	[6]
	(ii)	Bend	ng out shape and smoothing edges ding shape ills of tools equipment and safety precautions (if neces	ssary)	(0-2) (0-2) (0-2)	[6]
	(iii)	e.g. Joini	ropriate method of joining identified riveting, soldering, welding ing method described	,	(1) (0–3)	
		Deta	ills of tools, equipment and safety precautions (if nece	• /	(0–2) [Total: 20]	[6]
2	(a) (i)		able sheet plastic named acrylic, perspex, polystyrene		(1)	
	(ii)		able softwood named pine, spruce, cedar, parana pine, douglas fir		(1)	[2]
	(b) (i)	Usin	ing jig described g jig described ills of tools, equipment and safety precautions (if nece	ssary)	(0–2) (0–2)	[6]
	(ii)	e.g. Appı	ropriate method of making grooves identified router, plough plane ropriate method of making grooves described	000m/\	(1) (0–3)	ī61
	(iii)	Appı	rils of tools, equipment and safety precautions (if necestropriate joining method identified mortise and tenon, dowel joint, screws	ooaiy)	(0–2)	[6]
		Appr	ropriate joining method described ills of tools, equipment and safety precautions		(0–3) (0–2)	[6]
				I	Total: 20]	

Mark Scheme: Teachers' version

**Syllabus** 

**Paper** 

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Page 3			Mark Scheme: Teachers' version	Syllabus	Paper	
			GCE A/AS LEVEL – October/November 2010	9705	12	
(a)	Bott Side From Top	tom a es nt and	and back fold over flap		(1) (1) (1) (1) (1) (1)	[6]
(b)	e. g Suit	ı. poly table	ystyrene reason for choice given		(1) (1)	[2]
(c)	(i)		•		(0 <del>-</del> 2) (1)	[3]
	(ii)		•		(0 <del>-</del> 2) (1)	[3]
	(iii)	Mak	ing/attaching securing method described		(1) (0–3) (0–2) ITotal:	[6] <b>201</b>
				'	•	•
(a)	Ske	etch a	and notes explain how board slots in the back of contain	ner	(0–2)	[2]
(b)	Pro e.g.	blem Prob	2 described blems related to bags falling/blowing out of container, o	ontainer being low	(0-2) (0-2)	[4]
(c)	Exp	lanat	tion of how problem 2 could be overcome		(0-3) (0-3)	[6]
(d)	Exp	lanat	tion of why issues/points are considered relevant		(0-3) (0-3) (0-3)	[8] <b>201</b>
	(a) (b) (c) (c)	(a) App Bot Side Fro Top Glu  (b) Suit e. g. Suit e. g.  (c) (i) (iii)  (iii)  (a) Skee  (b) Pro Pro e.g. down  (c) Exp e.g.  (d) Situ Exp	(a) Appropri Bottom a Sides Front Top and Glue tab  (b) Suitable e. g. poly Suitable e.g. flexi  (c) (i) App Som  (ii) App Som  (iii) App Mak Deta  (b) Problem Problem e.g. Problem down on Common on Common and Explanation e.g. add	(a) Appropriate scale used Bottom and back Sides Front Top and fold over flap Glue tabs (at least 2 correct tabs)  (b) Suitable sheet plastic named e. g. polystyrene Suitable reason for choice given e.g. flexible, ready coloured  (c) (i) Appropriate method described Some details given about tools/equipment  (ii) Appropriate method described Some details given about tools/equipment  (iii) Appropriate method of securing top/flap identified Making/attaching securing method described Details of tools, equipment and safety precautions (if neces)  (a) Sketch and notes explain how board slots in the back of contains Problem 1 described Problem 2 described e.g. Problems related to bags falling/blowing out of container, of down on ground  (c) Explanation of how problem 1 could be overcome Explanation of how problem 2 could be overcome e.g. add a lid/top, make sides higher, put container on a stand.	(a) Appropriate scale used Bottom and back Sides Front Top and fold over flap Glue tabs (at least 2 correct tabs)  (b) Suitable sheet plastic named e. g. polystyrene Suitable reason for choice given e.g. flexible, ready coloured  (c) (i) Appropriate method described Some details given about tools/equipment  (ii) Appropriate method described Some details given about tools/equipment  (iii) Appropriate method of securing top/flap identified Making/attaching securing method described Details of tools, equipment and safety precautions (if necessary)  (a) Sketch and notes explain how board slots in the back of container  (b) Problem 1 described Problem 2 described e.g. Problems related to bags falling/blowing out of container, container being low down on ground  (c) Explanation of how problem 1 could be overcome Explanation of how problem 2 could be overcome e.g. add a lid/top, make sides higher, put container on a stand.  (d) Situation has been analysed and relevant issues/points identified Explanation of why issues/points are considered relevant Specific examples/evidence used to support conclusions	(a) Appropriate scale used (1) Bottom and back (1) Sides (1) Top and fold over flap (1) Glue tabs (at least 2 correct tabs) (1)  (b) Suitable sheet plastic named (1) e. g. polystyrene Suitable reason for choice given (1) G. flexible, ready coloured (1)  (ii) Appropriate method described (0-2) Some details given about tools/equipment (1)  (iii) Appropriate method described (0-2) Some details given about tools/equipment (1)  (iii) Appropriate method of securing top/flap identified (1) Making/attaching securing method described (0-3) Details of tools, equipment and safety precautions (if necessary) (0-2)  (a) Sketch and notes explain how board slots in the back of container (0-2) e.g. Problem 1 described (0-2) e.g. Problems related to bags falling/blowing out of container, container being low down on ground  (c) Explanation of how problem 1 could be overcome (0-3) e.g. add a lid/top, make sides higher, put container on a stand.

Page 4		ge 4	Mark Scheme: Teachers' version	Syllabus	Paper	
			GCE A/AS LEVEL – October/November 2010	9705	12	
5	(a)	Sketches	s and notes explain what the male and female formers	look like	(0–2)	[2]
	(b)	Problem	1 described 2 described blems related to the tray being hard to pick up and the the ends	nings being able	(0-2) (0-2) to	[4]
	(c)	Explanat	tion of how problem 1 could be solved tion of how problem 2 could be solved d holes made more accessible, lip goes all the way rou	nd the tray.	(0-3) (0-3)	[6]
	(d)	Explanat	has been analysed and relevant issues/points identification of why issues/points are considered relevant examples/evidence used to support conclusions	ed	(0-3) (0-3) (0-3)	[8]
					[Total:	20]
6	(a)		riate explanation of function of feature X ated to helping to prevent steps slipping or damaging s	urfaces or peopl	(0-2) e.	[2]
	(b)	Problem	1 described 2 described blems related to stability, safety, steps collapsing.		(0–2) (0–2)	[4]
	(c)	Explanat	tion of how problem 1 could be overcome tion of how problem 2 could be overcome a bracing pieces need to be added to both sides and b	ack legs.	(0-3) (0-3)	[6]
	(d)	Explanat	has been analysed and relevant issues/points identification of why issues/points are considered relevant examples/evidence used to support conclusions	ed	(0-3) (0-3) (0-3)	[8]
					[Total:	20]

Га	ge 5	Wark Schenie, reachers version	Syliabus	Fapei
		GCE A/AS LEVEL – October/November 2010	9705	12
(a)	One pre- OR	conceived idea presented		(0-3)
	The deve	elopment and selection of a range of ideas into a sing ould appear to work but lacks some technical detail	le design propo	esal (4–7)
	The deve	elopment and selection of a range of ideas into a sing des sufficient technical detail to show that the propor ork	•	
	Clarity ar	nd quality of sketching and explanatory notes		(0-3)
	Evaluatio	on (reasons for selection)		(0–3) [
(b)	As for pa	rt (a)		[16]
(c)	As for pa	rt (a)		[16]
(d)	As for pa	rt (a)		[16]
(e)	required	ring will exhibit a reasonable standard of outcome and design features	show some of	the (0-3)
		ving will exhibit a good standard of outcome and satures required to make the product function as intend		the (4–7)
	The draw	ring will be completed to a high standard of outcome atures required to make the product function as intend	•	the (8–10)
	Some us OR	e made of colour and tone to enhance the visual impa	ct of the drawing	g (0 <del>-</del> 2)
		e has been made of colour and tone to enhance the v	risual impact of	the (3–4)
	Very goo	od use has been made of colour, tone and material the visual impact of the drawing	representation	to (5–6) [

Mark Scheme: Teachers' version

**Syllabus** 

**Paper** 

[Total: 80]

Questions 8 and 9 as for Question 7

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