

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International Advanced Subsidiary and Advanced Level

MARK SCHEME for the October/November 2014 series

9705 DESIGN AND TECHNOLOGY

9705/11

Paper 1, maximum raw mark 120

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Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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Section A

- 1 (a) Each suitable reason given 1 mark
 e.g. available in large sizes [1]
 more stable [1] [2]
 cheaper
- (b) (i) Appropriate cutting and smoothing processes described [0–3]
 Details of appropriate tools, equipment and safety precautions [0–3] [6]
- (ii) Appropriate knock-down fittings identified and illustrated [0–2]
 Appropriate use of knock-down fittings described [0–2]
 Details of appropriate tools, equipment and safety precautions [0–2] [6]
- (iii) Appropriate painting process described [0–3]
 Details of appropriate tools, equipment and safety precautions [0–3] [6]
- [Total: 20]**
- 2 (a) Each appropriate advantage 1 mark
 e.g. easier to store when not in use [1]
 less likely to be damaged when not in use [1] [2]
- (b) Pictorial view has been produced [1]
 Parts correctly assembled [0–2]
 Thickness of card shown on at least some parts [1]
 Quality of drawing [0–2] [6]
- (c) (i) Appropriate method of marking out described [0–2]
 Appropriate method of cutting out described [0–2]
 Details of appropriate tools, equipment and safety precautions [0–2] [6]
- (ii) Making of appropriate stencils described [0–2]
 Appropriate use of stencils described [0–2]
 Details of appropriate tools, equipment and safety precautions [0–2] [6]
- [Total: 20]**

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3	(a) (i) Suitable plastic named e.g. acrylic polystyrene Perspex	[1]	
	(ii) Suitable glue named e.g. solvent (or tensol) cement polystyrene cement epoxy resin (araldite)	[1]	[2]
	(b) Appropriate (consistent) scale used	[1]	
	One piece development (net) drawn	[1]	
	3–4 sides correctly joined	[0–2]	
	5–7 sides correctly joined	[0–2]	[6]
	(c) (i) Appropriate cutting out and smoothing processes described	[0–3]	
	Details of appropriate tools, equipment and safety precautions	[0–3]	[6]
	(ii) Appropriate bending process described	[0–3]	
	Details of appropriate tools, equipment and safety precautions	[0–3]	[6]
			[Total: 20]

Section B

4	(a) Explanation of symbol e.g. the e mark indicates that the content (in litres) is an average quantity.	[0–2]	[2]
	(b) Problem one identified and described	[0–2]	
	Problem two identified and described	[0–2]	[4]
	(c) Explanation of how problem one could be overcome	[0–3]	
	Explanation of how problem two could be overcome	[0–3]	[6]
	e.g. increase height of front		
	add end pieces		
	add piece similar to front to back to improve stability		
	(d) Situation has been analysed and relevant issues / points identified	[0–3]	
	Clear and appropriate explanations of why issues / points are considered relevant	[0–3]	
	Specific examples / evidence used to support conclusions	[0–2]	[8]
			[Total: 20]

Page 4	Mark Scheme	Syllabus	Paper
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- 5 (a) Appropriate explanation of the purpose of feature X
e.g. this feature is a pop-up mechanism and makes the design stand off the back surface when the card is opened. [0–2] [2]
- (b) Problem one identified and described [0–2]
Problem two identified and described [0–2] [4]
e.g. text is missing from some instructions
some instructions do not have any illustrations
- (c) Explanation of how problem one could be overcome [0–3]
Explanation of how problem two could be overcome [0–3] [6]
e.g. appropriate text added to stages 3 and 5
appropriate illustrations added to stages 2, 4 and 8
- (d) Situation has been analysed and relevant issues / points identified [0–3]
Clear and appropriate explanations of why issues / points are considered relevant [0–3]
Specific examples / evidence used to support conclusions [0–2] [8]
- [Total: 20]
- 6 (a) Appropriate explanation of the purpose of feature X [0–2] [2]
e.g. this is the part you hold and twist round to open and close the vice.
- (b) Problem one identified and described [0–2]
Problem two identified and described [0–2] [4]
e.g. no safety guards
machine is not fixed to the floor
- (c) Explanation of how problem one could be overcome [0–3]
Explanation of how problem two could be overcome [0–3] [6]
e.g. appropriate safety guard added
machine is bolted to floor
- (d) Situation has been analysed and relevant issues / points identified [0–3]
Clear and appropriate explanations of why issues / points are considered relevant [0–3]
Specific examples / evidence used to support conclusions [0–2] [8]
- [Total: 20]

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7	(a)	One pre-conceived idea presented	[0–4]	
		OR		
		The development and selection of a range of ideas into a single design proposal which would appear to work but lacks some technical detail	[5–8]	
		OR		
		The development and selection of a range of ideas into a single design proposal which would appear to technical detail to show that the proposed solution would clearly work	[9–12]	
		Clarity and quality of sketching and explanatory notes	[0–4]	
		Evaluation (reasons for selection)	[0–4]	[20]
	(b)	As for part (a)		[20]
	(c)	As for part (a)		[20]
	(d)	The drawing will exhibit a reasonable standard of outcome and show some of the required design features	[0–5]	
		OR		
		The drawing will exhibit a good standard of outcome and show most of the design features required to make the product function as intended	[6–9]	
		OR		
		The drawing will be completed to a high standard of outcome and fully show the design features required to make the product function as intended	[10–14]	
		Some use made of colour and tone to enhance the visual impact of the drawing	[0–2]	
		OR		
		Good use has been made of colour and tone to enhance the visual impact of the drawing	[3–4]	
		OR		
		Very good use has been made of colour, tone and material representation to enhance the visual impact of the drawing	[5–6]	[20]
				[Total: 80]

Questions 8 and 9 as for Question 7