

Oxford Cambridge and RSA Examinations

General Certificate of Secondary Education

DESIGN AND TECHNOLOGY (RESISTANT MATERIALS)

PAPER 1

FOUNDATION TIER

1956/1

MARK SCHEME

1056/1

Specimen Paper 2003

Question	Answer	Total Marks Available
1(a) (i)	acrylic, ABS, PVC, polycarbonate, not polystyrene.	1
(ii)	ability to bend to shape.	1
1(b) (i)	marking out – chinagraph pencil, felt marker, scribe, try square, ruler, odd legs etc.	2
(ii)	sawing - coping, jig, vibro, hack or band saws.	1
(iii)	finishing - file, wet or dry, buffing, acrylic polish, Brasso, emery cloth, not glasspaper.	2
(iv)	bending - strip heater, line bender.	1
1(c)	eye guard, tuck in loose clothing, tie long hair, remove chuck key, clamping, holding, speed of drill, support material.	2
		Total 10

2(a)	specification points - support card, easy to replace, attractive, durable.	3
2(b)	1 mark for each named materials main sizes card supported ease of replacement	4
2(c)	batch production method-use of appropriate jig, template or former to assist one specific process. <i>0-3 dependent on quality / clarity of method.</i>	3
		Total 10

Question	Answer	Total Marks Available
3(a)	1 mark for each handle motion - reciprocating ears motion - oscillating	2
3(b)	1 mark for each INPUT label by the handle OUTPUT label by the ears	2
3(c)	model made to test size, check mechanism, allow testing, avoid costly mistakes later.	2
3(d)	one mark for each ears joined to handle by two linkages correct pivot positions appropriate pivots, e.g. dowel	3
3(e)	suitable improvement - design of face features, shaped handle cover mechanism, accept sensible proposals.	1
		Total 10

4(a) (i)	reason for aluminium excellent weight - strength, malleable, variety of finishes, etc. reason for steel - relatively cheap material, weight an advantage, etc.	1
(ii)	pressing assures repetitive accuracy, minimises waste.	2
(iii)	environmental advantage - metals more easily recycled and more plentiful supply, whereas plastics are a non-renewable resource. (reference to both features for maximum marks.)	2
4(b)	1 mark for each: design for label designed /drawn on screen vinyl-cutting machine set up instructions downloaded from computer to machine Accept a variety of other relevant/ important practical processes involved	3
4(c)	quality control testing to check - accuracy of dimensions surface finish, appearance, material consistency/quality, function	2
		Total 10

Question	Answer	Total Marks Available
5(a)	solid wood - beech	1
5(b)	design suitable for children – brightly painted finish, appropriate size, movement of wheels, painted features, etc.	2
5(c)	mass-production - simple to manufacture shapes, details of windows, ladder etc. applied, spray painted finish, etc.	2
5(d)	reasons for plastics – inherent colour, smooth and rounded parts, intricate detail possible in production, extremely durable etc.	2
5(e)	modifications could include - use detachable pieces for cab, body etc. separate ladder hinged and lifts, etc. <i>Accept sensible features. 0 - 3 dependant on quality of proposal/communication.</i>	3
		Total 10

Total mark available: 50