2013 Craft & Design

Standard Grade
Foundation/General/Credit

Finalised Marking Instructions

2013 Craft and Design

Standard Grade – Foundation

Marking Instructions

			Acceptable answers	Unacceptable answers or answers for discussion
1.	**(a)**	(i)	2nd Tick box – Snips	
		(ii)	3rd Tick box – Junior hacksaw	
		(iii)	3rd Tick box – half round file	
	(b)		3rd Tick box – It is magnetic	
	(c)	(i)	Stops it from rusting	
			Adds colour	
			Looks good	
			Protection	
		(ii)	Brush, Spray can, Roller, Pad.	
2.	**(a)**		3rd Tick box – Thermoplastic	
	(b)		Sharp corners/edges Upright too thin may snap Base of lamp too small will fall over/top heavy	
	(c)	(i)	3rd Tick box – Strip heater	
		(ii)	Heating the plastic to soften before bending	Bend plastic-0; Melt plastic-0
		(iii)	Wear gloves, have hair tied back Any other acceptable answer	Wear eye protection/goggles – 0
	(d)		Mark out shape	
	(e)		2nd Tick box – Wet and dry	
3.	**(a)**	(i)	3rd Tick box – Research	
		(ii)	Length of the aluminium stem – (A) Diameter of the handle – (B)	
	(b)	(i)	Beech	
		(ii)	Sander, Band/Jig/Hegner/Fret Saw, etc.	
	(c)	(i)	Metalwork lathe/metal lathe/lathe	
		(ii)	(A) – 3 Jaw chuck (B) – Tool post (C) – Tail stock	
	(d)		3rd Tick box – Die	

Acceptable answers				Unacceptable answers or answers for discussion
4.	**(a)**	(i)	Available in large sheets/easy to cut & shape	
		(ii)	Raised side panels	
		(iii)	Playing in	
		(iv)	Expensive	
	(b)		1st Tick box – Template	
5.	**(a)**	(i)	Wood lathe	lathe on own – 0
		(ii)	Wear goggles, hair tied back, sleeves rolled up. Check material/tailstock/rest secure before switching on. Know where emergency stops are. Extraction which includes guard. Any acceptable answer	
	(b)			

Tools		**Uses**
Plane		Marking lines at 90° to an edge
Tenon Saw		Checking diameters
Steel Rule		Cutting wood to length
Outside Callipers		Removing waste wood
Try Square		Measuring the length of wood

	(c)		Varnish, wax, Danish oil, lacquer, linseed oil	
6.	**(a)**		3rd Tick box – A mixture of two or more metals	
	(b)		4th Tick box – Yellow	
	(c)		2nd Tick box – Hand vice	
	(d)		3rd Tick box – Hide mallet	
	(e)	(i)	2nd Tick box	
		(ii)	3rd Tick box – Bradawl	

Acceptable answers	Unacceptable answers or answers for discussion
7. **(a)** (i) Marking gauge	
(ii) Coping saw	
(iii) Bevel edged chisel	Chisel -0
(iv) Keep hands behind blade Always secure work before using chisel	
(b) (i) 4th tick box – Cross halving	
(ii) 2nd tick box – Dowel	
(c) (i) 3rd tick box – PVA	
(ii) 1st tick box – G clamp	
(d)	

Part	Quantity	Length	Breadth	Thickness	Material
Legs/body		200			
Arms			40		
Base				20	
Hair					Acrylic

8. (i) Sequence of operations

(ii) Initial ideas

(iii) Cutting List

(iv) Evaluation

(v) Specification

2013 Craft and Design

Standard Grade – General

Marking Instructions

			Acceptable answers	**Unacceptable answers or answers for discussion**
1.	**(a)**	(i)	The holes in the hanger. Wooden pegs.	
		(ii)	To suit a range of users. People of different heights	
	(b)		x – Halving joint/corner halving/ lap joint/halving. y – Dowel joint z – Mortice and Tenon – must include both names	Cross halving -0; Rebate -0;Corner rebate -0.
	(c)	(i)	Wood lathe	Lathe - 0
		(ii)	Order does not matter. Any three from below:- Find centre/corner to corner; centre punch both ends; scribe circle on both ends; remove corners; cut and vee in one end.	
		(iii)	(A) Parting chisel (B) Gouge	
2.	**(a)**		Mild steel	
	(b)		1. Ball pein/pin/pen hammer/ Engineers hammer 2. Engineers square 3. Odd leg callipers/Jenny callipers	
	(c)		Forging	
	(d)		Spot weld/soldering/brazing/ Mig welding/electric arc welding/ nut, bolt/rivet, screws.	
	(e)		Facing – Chamfer or taper turning	
	(f)		Die Tap	

			Acceptable answers	Unacceptable answers or answers for discussion
3.	**(a)**	(i)	Aesthetics	
		(ii)	Cost	
		(iii)	Ergonomics	
		(iv)	Function	
	(b)		Any of the following: MDF, Plywood, Chipboard, Pine board.	Hardboard – 0; Blockboard -0.
	(c)		Stable, can be painted, does not warp, cost and environmental issues.	Large sheets-0; Strong-0; Shape-0.
	(d)		Pillar drill/Bench drill/Vertical drill. no tools left on machine; chuck key removed; guard down; clamp material.	Stop button -0; chuck key -0 NOT PERSONAL SAFETY
	(e)		Hand tools – Coping/Bow/Jig/fret saw Machine tools – Jigsaw, Band saw, Hegner saw, Scroll saw.	
	(f)		PVA	
	(g)		Aesthetics, Protection, easy to clean	
	(h)		Paint, Stain, Varnish, Wax, Oil.	
4.	**(a)**	(i)	Acrylic or any suitable thermoplastic	
		(ii)	Any two from the following: easy to bend/self-coloured/easy to keep clean/flexible/recycled.	Strong -0;
	(b)		200mm	
	(c)		Doesn't scratch/can be rubbed off/easier to see.	
	(d)		So it doesn't snap or vibrate	
	(e)		Draw file/wet and dry/polish /scraper/steel wool.	
	(f)	(i)	Strip heater/Line bender	
		(ii)	Snap	
	(g)	(i)	1st: Mark out Last: Bend thermoplastic	
		(ii)	Evaluation	

			Acceptable answers	Unacceptable answers or answers for discussion
5.	**(a)**		Specification	
	(b)		Size/weight	Flat -0
	(c)		Materials, number of parts, name of parts, Cost.	
	(d)	(i)	Casting.	
		(ii)	Low melting point.	
		(iii)	Heat resistant.	
	(e)		1. Oven. 2. Fluidiser.	

2013 Craft and Design

Standard Grade – Credit

Marking Instructions

			Acceptable answers	**Unacceptable answers or answers for discussion**
1.	**(a)**		Doesn't rust Doesn't need a finish, shiny, etc Durable, Strong, Malleable If you drop it, it won't break Lightweight Any other suitable answer.	Low melting point -0
	(b)		To get a grip. To show where to turn	no aesthetic reason
	(c)		Increase turning speed, fine cut Sharp tools Tool correctly positioned Lubrication/coolant Slow feed	
	(d)		Parting/Parting tool	
	(e)	(i)	Centre Drill; Slocombe; Combination.	
		(ii)	To make a pilot hole in the centre of the material	
	(f)	(i)	Micrometer	
		(ii)	Accuracy	
	(g)		chamfering/tapering	
2.	**(a)**	(i)	anthropometric	
		(ii)	to make sure it fits/usable by the majority of people/comfortable	
	(b)		Won't dent, Harder, More Durable	Lightweight -0; Aesthetics -0;Stability-0;Heavier -0
	(c)		Rounded corners Tapered sides Clean/Smooth surface Screw hole in pattern for lifting.	Parting Powder -0

			Acceptable answers	Unacceptable answers or answers for discussion
2.	**(d)**	(i)	To soften, make malleable, to remove work hardness/brittleness	
		(ii)	To act as a temperature indicator.	
	(e)		It won't dent the metal.	
	(f)(i)		Lubricate/grease Turn back die to break swarf Keep die level Taper end of bar	
	(f)(ii)		loosen centre screw Tighten outer screws Tighten centre screw	
3.	**(a)**		Thought shower/brainstorm; Shape manipulation/SAM Analogy; Mood boards; Themes; Take your pencil for a walk; Morphological analysis; Research existing products; market research. Lateral thinking Any other suitable answer.	Survey - 0
	(b)		Oak, Beech, Ash, Mahogany, Elm or any other suitable answer	Balsa - 0
	(c)		Pine grows quicker. Home grown.	
	(d)	(i)	A –driving centre B – Dead centre Fork centre Cone centre Butterfly centre	
		(ii)	It turns the blank	
		(iii)	Lubricate; use a revolving centre.	
	(e)	(i)	To allow the damaged ends of the blank to be sawn. To allow the pots to be parted off.	
		(ii)	Gouge; Round nose scraper. Scraper	Skew chisel -0
	(f)		The speed of turning The position of tool rest The height of the tool rest The distance of tool rest from blank The removal of the tool rest The position of tail stock The position of extraction system	Change tools or centres -0

			Acceptable answers	Unacceptable answers or answers for discussion
4.	**(a)**		Storage/Magazine rack/Foot rest	Aesthetics -0
	(b)		Aesthetics, To show clients, to get opinions, to test viability of manufacture, to check sizes, any other suitable answer.	Cost -0
	(c)		ergonome	
	(d)		it can be reheated and reshaped/plastic memory	
	(e)		Brittle or weak/Scratches easily/Cost.	
5.	**(a)**		To identify target market; Cost - to price item; To identify demand/desire from customers; To see what other similar products there are; To make sure the product is designed correctly; To gather feedback for evaluation of product; To improve the performance of the product;	
	(b)		It is more aesthetically pleasing; Does not show joint at front.	
	(c)		Set the gauge approximately half way from one side of the wood. Then measure from the other side. Tap the stem to adjust the spur. Repeat until spur is in the middle of wood.	
	(d)		To make sure the bottom is level/flat	Accurate -0
	(e)	(i)	Plane with the grain. Sharpen blade; Lever – level blade. Wheel – depth of blade. Fine cut. Check plane on piece of scrap.	
		(ii)	Planing against the grain.	
	(f)	(i)	Dry clamping/cramping	
		(ii)	Measuring the diagonals (corner to corner).	
	(g)		Raising the grain.	

			Acceptable answers	Unacceptable answers or answers for discussion
6.	**(a)**	(i)	The human body and product interface; Comfort in using the product; Making the product easier to use.	
		(ii)	Bristles for brushing; Rubber handle for grip; Bent shape to fit hand and mouth; Thumb pads; Handle has variable thickness to allow all hand sizes to grip; Rubber is easier to grip when wet; Any other suitable answer.	One word answers from paper -0
	(b)	(i)	To highlight a feature/function; To make eye catching; To show different parts;	Look nice -0
		(ii)	Shapes; Materials; Styles; Different Texture or patterns.	Sizes -0

[END OF MARKING INSTRUCTIONS]