2012 Craft & Design

Standard Grade
Foundation/General/Credit

Finalised Marking Instructions

2012 Craft and Design

Standard Grade – Foundation

Marking Instructions

Acceptable answers				Unacceptable answers or answers for discussion
1.	**(a)**	(i)	MDF	
		(ii)	Lap joint	
		(iii)	Panel pin	
	(b)	Try Square Bevel edged chisel Marking Gauge		deduct one mark for each additional box ticked
	(c)	(i)	PVA	
		(ii)	Damp cloth, Paper towel, Steel Rule	
		(iii)	Paint	
2.	**(a)**	(i)	Safety	
		(ii)	Colour	
	(b)	(i)	Wood Lathe, Lathe	
		(ii)	A – Head Stock B – Tool Rest C – Tail Stock	
	(c)	Parting Chisel		
	(d)	Name – Tenon saw, Back saw, Dovetail Saw Name – Smoothing Plane Jack Plane		Do not accept Saw Accept Plane
	(e)	(i)	Pedestal drill	
		(ii)	Any personal safety. Hair, goggles, chuck key, tie etc Guard down, secure material being drilled or any other suitable rule	

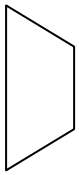
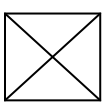
Acceptable answers				Unacceptable answers or answers for discussion
3.	**(a)**	Letters will fall out. Only one side		Do not accept sharp edges
	(b)	(i)	Thermo Plastic	
		(ii)	Acrylic can be reheated and re-shaped Acrylic is water proof	Deduct a mark for each additional tick
		(iii)	Support the acrylic on a piece of wood	
		(iv)	Hand vice	
	(c)	1. Plane 2. Coping saw 3. Brush		
	(d)	Cross file		
	(e)	Strip heater		
4.	5. Machine tools 3. Joining materials 4. Hand tools 1. Design Knowledge 2. Materials and their properties 7. Safety			
5.	**(a)**	Stability		
	(b)	(i)	Aluminium	
		(ii)	Cope and drag	
		(iii)	Leather apron, spats, gauntlets, full face mask, gloves, apron, goggles.	
	(c)	(i)	Centre punch	
		(ii)	Stops the drill from slipping	
		(iii)	Twist	
	(d)	(i)	File	
		(ii)	Die	
		(iii)	Tap	

Acceptable answers				Unacceptable answers or answers for discussion
6.	**(a)**	(i)	Specification	
		(ii)	Research	
		(iii)	Initial ideas	
		(iv)	Evaluation	
	(b)	Back, 200, 50		
	(c)	Through housing		
	(d)	(i)	Hand router	
		(ii)	Levelling joint	
	(e)	Rubber, sand paper, glass paper, plane, scraper		
	(f)	Countersunk head		

2012 Craft and Design

Standard Grade – General

Marking Instructions

Acceptable answers	**Unacceptable answers or answers for discussion**
1. (a) Aluminium, brass, copper or any other suitable non-ferrous metal.	
(b) Safety, to stop people cutting themselves, Aesthetics	
(c) (i) Engineer square	
(ii) Folding bars/Bending bars	
(iii) Rawhide mallet/hide mallet, leather mallet	Do not accept mallet on its own
(d) Pine, spruce, or any other suitable soft wood	
(e) Varnish, oil, wax, stain, French polish or any other transparent finish for wood	
(f) (i) Head shape on correct part of screw 	
(ii) To sit flush, level, flat with the surface. (It doesn't stick out etc)	
2. (a) Any of the following: Blank secure Tool post in correct position Lathe at correct speed Tool rest secure/tighten Extraction on Blank on straight Tail stock secure/tighten	Do not accept any personal safety
(b) Outside callipers (accept callipers) To check or measure diameter of turning Implication of measurement	
(c) Corner to corner 	
(d) Fostner bit	
(e) (i) 1st box	
(ii) Dampen the wood/wet the wood	

			Acceptable answers	Unacceptable answers or answers for discussion
3.	**(a)**		A – Three jaw chuck B – Tool post C – Tailstock	
	(b)		Safety/aesthetic/location/location implication	
	(c)		To allow grip/to prevent keys falling.	Do not accept finger grip
	(d)	(i)	Facing/Facing off	
		(ii)	Parting/Parting off	
4.	**(a)**		Research/investigation	
	(b)	(i)	Acrylic or any other suitable thermoplastic	
		(ii)	Protect the plastic from being scratched	
	(c)		Coping saw	
	(d)		2 – Draw file 4 – Polish/Acrylic paste	
	(e)		Oven	
	(f)		Any of the following: Reason 1 – Speed (faster), (saves time) Reason 2 – More accurate, repeatable, you can use it over and over	
5.	**(a)**	(i)	A - Drag B - Riser C - Crucible	
		(ii)	Low melting point (compared to steel etc)	
		(iii)	Heat proof/doesn't catch fire easily	
	(b)		Tongs	Do not accept pliers
	(c)		Hacksaw	Do not accept Junior Hacksaw

Acceptable answers

Unacceptable answers or answers for discussion

6. **(a)** Any of the following:
It must be strong
It must fit around a bike/lampost
It must be easily opened/closed
It must be carried on a bike/bag
It must be visible to put off thieves
Lock does not damage bike
Aesthetic quality
Economic reason
Any other suitable answer

(b) (i) Steel

(ii) Heat the metal, Anneal, Normalise

(c) (i) Oven and Fluidizer

(ii) Colour finish/durable, hard wearing finish.

(d) Evaluation

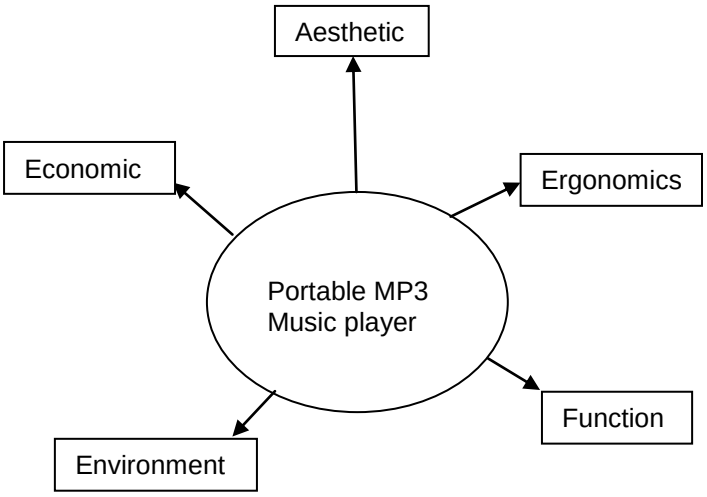
7. **(a)** Sharp parts of the tools are sticking up.
Stability.

(b) X – mortise and tenon
Y – cross halving, halving
Z – dowel joint

(c) (i) Marking gauge

(ii) To mark a line parallel to an edge. Mark the depth of joint. To locate the centre.

8. Start at the top then right to left thereafter



2012 Craft and Design

Standard Grade – Credit

Marking Instructions

				Acceptable answers	Unacceptable answers or answers for discussion
1	**(a)**			As a finger hole to ensure the stools can be lifted To help assemble or disassemble cube Any answer that suggests lifting or gripping	
	(b)			Mortice	
	(c)	(i)		Adjusts depth of the blade/cut	Adjusts the blade 0
		(ii)		Adjusts the angle of the blade/levels the blade	Adjusts the blade 0
	(d)			Turn lever (A) to move part (B) Part (C) can be moved by placing pin in new hole position	
	(e)			Use a try square Check diagonals are equal	
2	**(a)**	(i)		Soft, easy to bend/drill/shape/cut/rust Accept rust but this can only be used once Any one of the above	Do not accept cheap, lightweight, melting point.
		(ii)		Colour, shiny, can be polished, rust Any one of the above	
	(b)	(i)		Spring dividers/dividers	Compass 0, Scriber 0
		(ii)		Odd leg callipers/Jenny callipers	Callipers 0, rule & scriber 0
	(c)	(i)		Twist drill, jobber	
		(ii)		Centre punch, make a dent	
		(iii)		File/deburring tool/larger drill/countersink drill Any one of the above	
	(d)			Pop rivet	Rivet 0
	(e)	(i)		To make it more malleable/easier to bend/remove brittleness/make softer	
		(ii)		Use soap heated until black	

	(f)		Make bending of the sides easier To ensure that all four sides are bent to the same angle. Keeps base square.	
3.	**(a)**	(i)	Any ferrous metal	
		(ii)	Any hard wood	Balsa 0
	(b)	(i)	Any three from the following list: Material Diameter Process Finish	No repeat answers
		(ii)	It would leave a pip	Surface would not be smooth 0
		(iii)	Chamfer A – safety/remove sharp edge/aesthetic reason Chamfer B – location/assist threading	
		(iv)	Compound	
		(v)	Parting	
	(c)		6mm	
	(d)		Knurling/plastic dip coating/else square or hex bar/file flats/tommy bar. Any one of the above	

			Acceptable answers	Unacceptable answers or answers for discussion
4.	**(a)**	(i)	Ideas/initial ideas/research/investigation	
		(ii)	Working drawing/plan for manufacture	
		(iii)	Presentation drawing/customer sketch/final design/proposal.	
	(b)	(i)	Anthropometric	
		(ii)	Dimensions of the hand eg width, thickness. Dimensions of the hips Length and diameter of thighs	Do not accept waist sizes
	(c)		90% or 95% or 5%/Percentile to 95%/Percentile	
	(d)		Any two from Check aesthetics Develop ideas Make quick design changes Show customers Check sizes Evaluate the design	
	(e)		Material used Recyclable Sustained sources	
	(f)		Drill a hole then use coping saw/jigsaw/laser cutter/CNC machines	
5.	**(a)**		1. Work surface 2. Storage	
	(b)		Any two from Mood boards Thought showers Existing products Take your pencil for a walk	

			Acceptable answers	Unacceptable answers or answers for discussion
	(c)	(i)	Any two from Materials Number of parts required Part names	
		(ii)	Layers are at 90° or sketched to indicate this	
	(d)		Band saw/jigsaw/scroll saw/hegner saw	
	(e)		Lower skill factor required/quicker/ dismantled	Do not accept easier on its own, stronger
	(f)		Paint before assembly/use masking tape	
6.	**(a)**	(i)	Reduces friction/no grease required/ wood does not burn	
		(ii)	Gouge/scraper	
		(iii)	Outside/External callipers	Callipers 0
	(b)		Remove tool rest/increase speed	Change Speed 0
	(c)		Non toxic finish	

[END OF MARKING INSTRUCTIONS]